FT. WORTH, TEXAS FORT WORTH CENTRAL CITY PRELIMINARY DESIGN SOL. NO. XXXX

US ARMY CORPS
OF ENGINEERS
Ft. Worth District

PRELIMINARY DESIGN

FORT WORTH CENTRAL CITY

FORT WORTH, TEXAS

CIVIL / STRUCTURAL PRELIMINARY DESIGN

APPENDIX C

VOLUME II - SUPPLEMENTAL PLANS

MARCH 2008

CDM

TARRANT REGIONAL WATER DISTRICT

IN ASSOCIATION WITH Freese and Nichols

ARS Engineers, Inc.
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FORT WORTH CENTRAL CITY CONTR. NO. XXXXX SOL. NO. XXXX FORT WORTH, TEXAS

SHEET LIST

Sheet Number	File Name	Sheet Title 1	Sheet Title 2	Sheet Title 3
G-01	00001_COE_G-001xx01			
GI-01	00001_COE_GI-001xx02	Drawing Index		
GI-02	00001_COE_GI-002xx03	Vicinity and Location Map		
CS-01	00001_COE_CS-101xx04	Valley Storage Mitigation	Key Plan	
CG-01	07040_COE_CG-101xx05	Valley Storage Mitigation	Site Plan	Rockwood Park - West (Site 2)
CG-02	07040_COE_CG-102xx06	Valley Storage Mitigation	Grading Plan	Rockwood Park - West (Site 2)
CG-03	07040_COE_CG-303xx07	Valley Storage Mitigation	Cross Sections	Rockwood Park - West (Site 2)
CG-04	07030_COE_CG-104xx08	Valley Storage Mitigation	Site Plan	Samuels Avenue (Site 5A)
CG-05	07030_COE_CG-105xx09	Valley Storage Mitigation	Site Plan	Samuels Avenue (Site 5C)
CG-06	07030_COE_CG-106xx10	Valley Storage Mitigation	Grading Plan	Samuels Avenue (Site 5A)
CG-07	07030_COE_CG-107xx11	Valley Storage Mitigation	Grading Plan	Samuels Avenue (Site 5C)
CG-08	07030_COE_CG-308xx12	Valley Storage Mitigation	Cross Sections	Samuels Avenue (Site 5A & 5C)
CG-09	07020_COE_CG-109xx13	Valley Storage Mitigation	Site Plan	Riverside Park (Site 21)
CG-10	07020_COE_CG-110xx14	Valley Storage Mitigation	Grading Plan	Riverside Park (Site 21)
CG-11	07020_COE_CG-311xx15	Valley Storage Mitigation	Cross Sections	Riverside Park (Site 21)
CG-12	07010_COE_CG-112xx16	Valley Storage Mitigation	Site Plan	Ham Branch
CG-13	07010_COE_CG-113xx17	Valley Storage Mitigation	Site Plan	Ham Branch
CG-14	07010_COE_CG-114xx18	Valley Storage Mitigation	Grading Plan	Ham Branch
CG-15	07010_COE_CG-115xx19	Valley Storage Mitigation	Grading Plan	Ham Branch
CG-16	07010_COE_CG-316xx20	Valley Storage Mitigation	Cross Sections	Ham Branch
CG-17	07010_COE_CG-317xx21	Valley Storage Mitigation	Profile	Ham Branch
CG-18	00001_COE_CG-118xx22	Valley Storage Mitigation	Site Plan	OxBow-Gateway Site
CG-19	00001_COE_CG-119xx23	Valley Storage Mitigation	Riverside Oxbow Enlarged Plan	OxBow-Gateway Site
CG-20	00001_COE_CG-120xx24	Valley Storage Mitigation	Gateway Park Enlarged Plan	OxBow-Gateway Site
CG-21	00001_COE_CG-121xx25	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-22	00001_COE_CG-122xx26	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-23	00001_COE_CG-123xx27	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-24	00001_COE_CG-124xx28	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-25	00001_COE_CG-125xx29	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-26	00001_COE_CG-126xx30	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-27	00001_COE_CG-127xx31	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-28	00001_COE_CG-128xx32	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-29	00001_COE_CG-129xx33	Valley Storage Mitigation	Grading Plan	OxBow-Gateway Site
CG-30	00001_COE_CG-330xx34	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CG-31	00001_COE_CG-331xx35	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CG-32	00001_COE_CG-332xx36	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CG-33	00001_COE_CG-333xx37	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CG-34	00001_COE_CG-334xx38	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CG-35	00001_COE_CG-335xx39	Valley Storage Mitigation	Cross Sections	OxBow-Gateway Site
CP-01	00001_COE_CP-101xx40	Valley Storage Mitigation	Plan and Profile	Beach Street
CP-02	00001_COE_CP-102xx41	Valley Storage Mitigation	Plan and Profile	West Park Road
CP-03	00001_COE_CP-103xx42	Valley Storage Mitigation	Plan and Profile	West Park Road
CP-04	00001_COE_CP-104xx43	Valley Storage Mitigation	Plan and Profile	West Park Road Spur
CP-05	00001_COE_CP-105xx44	Valley Storage Mitigation	Plan and Profile	East Park Road
CP-06	00001_COE_CP-306xx45	Valley Storage Mitigation	Typical Pavement Sections	
CU-01	00001_COE_CU-101xx46	Valley Storage Mitigation	Utility Key Plan	Oxbow-Gateway Site
CU-02	00001_COE_CU-102xx47	Valley Storage Mitigation	Utility Plan	Oxbow-Gateway Site
CU-03	00001_COE_CU-103xx48	Valley Storage Mitigation	Utility Plan	Oxbow-Gateway Site
CU-04	00001_COE_CU-104xx49	Valley Storage Mitigation	Utility Plan	Oxbow-Gateway Site
CU-05	00001_COE_CU-105xx50	Valley Storage Mitigation	Utility Plan	Oxbow-Gateway Site
SS-01	00001_COE_SS-101xx51	Samuels Avenue Dam	Samuels Avenue Lock & Dam	Site Plan
SS-02	00001_COE_SS-102xx52	Samuels Avenue Dam	Samuels Avenue Lock & Dam	Phasing Plan
SS-03	00001_COE_SS-403xx53	Samuels Avenue Dam	Plan	
SS-04	00001_COE_SS-304xx54	Samuels Avenue Dam	Section and Elevation	
SS-05	00001_COE_SS-605xx55	Samuels Avenue Dam	Stability Analysis	
SS-06	00001_COE_SS-606xx56	Samuels Avenue Dam	Training Walls and Right Abutment Wall	Dimensions
SS-07	00001_COE_SS-607xx57	Samuels Avenue Dam	Right Training Wall	Stability Analysis
SS-08	00001_COE_SS-608xx58	Samuels Avenue Dam	Left Training Wall	Stability Analysis
SS-09	00001_COE_SS-609xx59	Samuels Avenue Dam	Right Abutment Wall	Stability Analysis
SS-10	00001_COE_SS-410xx60	Samuels Avenue Dam	Lock	Plan and Section
SS-11	00001_COE_SS-611xx61	Samuels Avenue Dam	Upstream, Downstream and Floodwalls	Dimensions
SS-12	00001_COE_SS-612xx62	Samuels Avenue Dam	Upstream Lockwall	Rotational and Stability Analysis
SS-13	00001_COE_SS-613xx63	Samuels Avenue Dam	Downstream Lockwall	Rotational and Stability Analysis
SS-14	00001_COE_SS-614xx64	Samuels Avenue Dam	Floodwall	Rotational and Stability Analysis
SS-15	00001_COE_SS-415xx65	Marine Creek Dam	Plan	
SS-16	00001_COE_SS-316xx66	Marine Creek Dam	Section	
SS-17	00001_COE_SS-617xx67	Marine Creek Dam	Stability Analysis	
SS-18	00001_COE_SS-618xx68	Marine Creek Dam	Left Training Wall	Dimensions
SS-19	00001_COE_SS-619xx69	Marine Creek Dam	Left Training Wall	Rotational and Stability Analysis
SS-20	00001_COE_SS-620xx70	Marine Creek Dam	Abutment Walls	Dimensions
SS-21	00001_COE_SS-621xx71	Marine Creek Dam	Left Abutment Wall	Stability Analysis
SS-22	00001_COE_SS-622xx72	Marine Creek Dam	Right Abutment Wall	Rotational Analysis

REFERENCE SHEETS

Sheet Number	Sheet Title 1	Sheet Title 2	Sheet Title 3
RS-01		Beach Street	Elevation
RS-02		Beach Street	Plan
RS-03		Beach Street	Slab
RS-04		Beach Street	Abutment
RS-05		Beach Street	I-Beam
RS-06		Park Road	Elevation
RS-07		Park Road	Plan
RS-08		Park Road	Slab
RS-09		Park Road	Abutment
RS-10		Park Road	I-Beam

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

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Design file: Designfile
Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by:M. KOLSON
Drawn by: J. FRANCIS
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
UpdateStatus: PEStatus

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
DRAWING INDEX

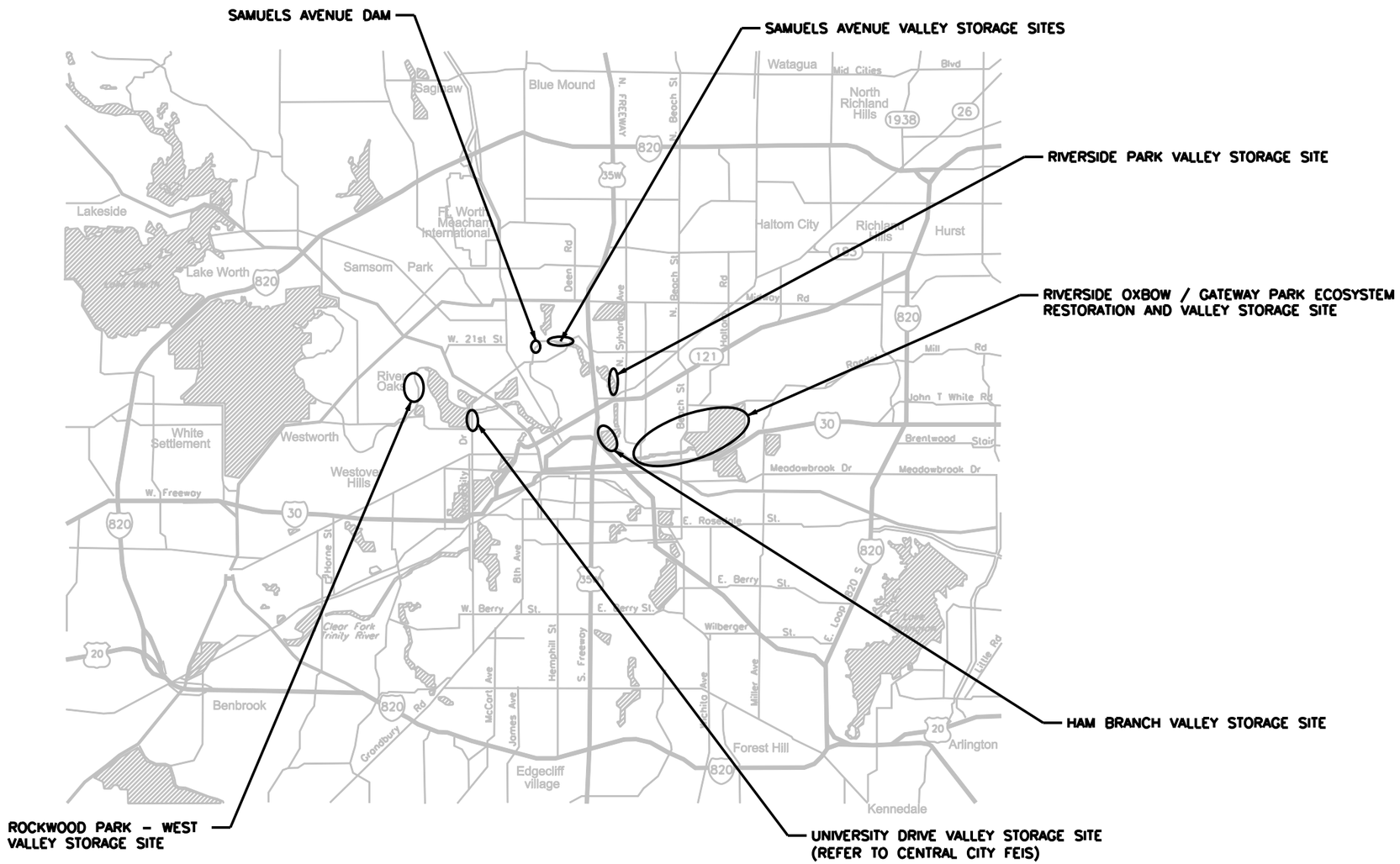
SheetDescription3

SHEET IDENTIFICATION

GI-01

BASE TOPOGRAPHIC AND FEATURE MAPPING AS SHOWN IS FROM DATA CD PROVIDED BY THE TARRANT REGIONAL WATER DISTRICT ON SEPTEMBER 10, 2004 AS USED FOR THE FORT WORTH CENTRAL CITY FINAL ENVIRONMENTAL IMPACT STATEMENT, PRELIMINARY DESIGN. DATA IS DERIVED FROM MAPPING DATA COMPLIED FROM 1"=800' AERIAL PHOTOGRAPHY OBTAINED ON FEBRUARY 22 AND 23, 1991 AS PREPARED BY GREENHORNE & O'MARA, INC (DULUTH, GA) FOR USACE AND SUBSEQUENTLY UPDATED BY THE TARRANT REGIONAL WATER DISTRICT.

COORDINATE BASIS IS TEXAS STATE PLANE GRID, ZONE 5351 FPS 4202, TEXAS NORTH CENTRAL (FEET), HORIZONTAL CONTROL BASED ON NAD83, AND VERTICAL CONTROL BASED ON NAD 1929.



VICINITY MAP
NTS

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US Army Corps of Engineers
Fort Worth District

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Designed by:M. OLESON
Drawn by: J. PRANGE
Checked by:D. FUNDERLIC
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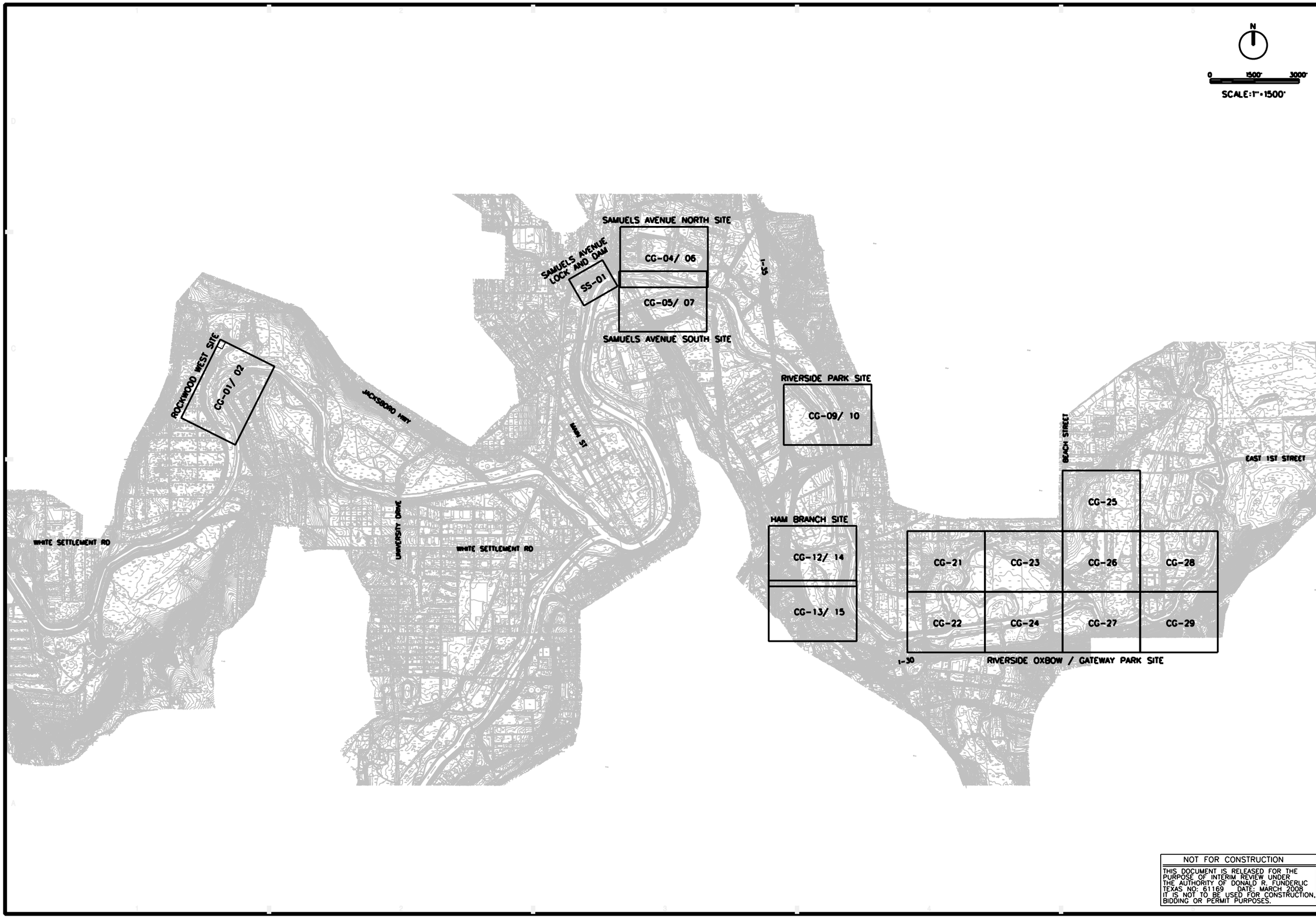
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VICINITY AND LOCATION MAP

SHEET IDENTIFICATION
GI-2



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US Army Corps of Engineers
Fort Worth District

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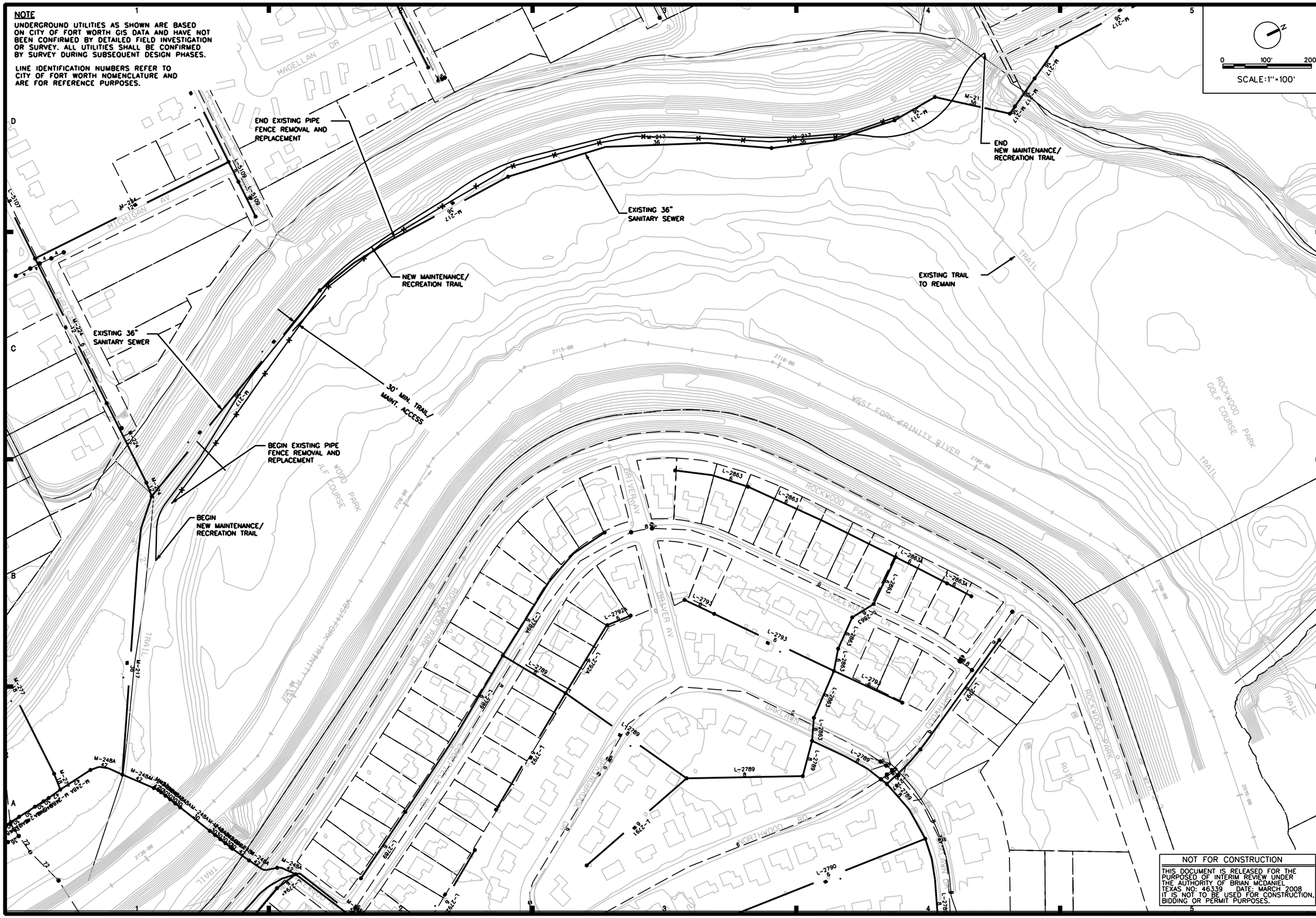
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
KEY PLAN

SHEET IDENTIFICATION

CS-01



US Army Corps of Engineers
Fort Worth District

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Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: B. McDANIEL
License Number: 46339
License State: TEXAS

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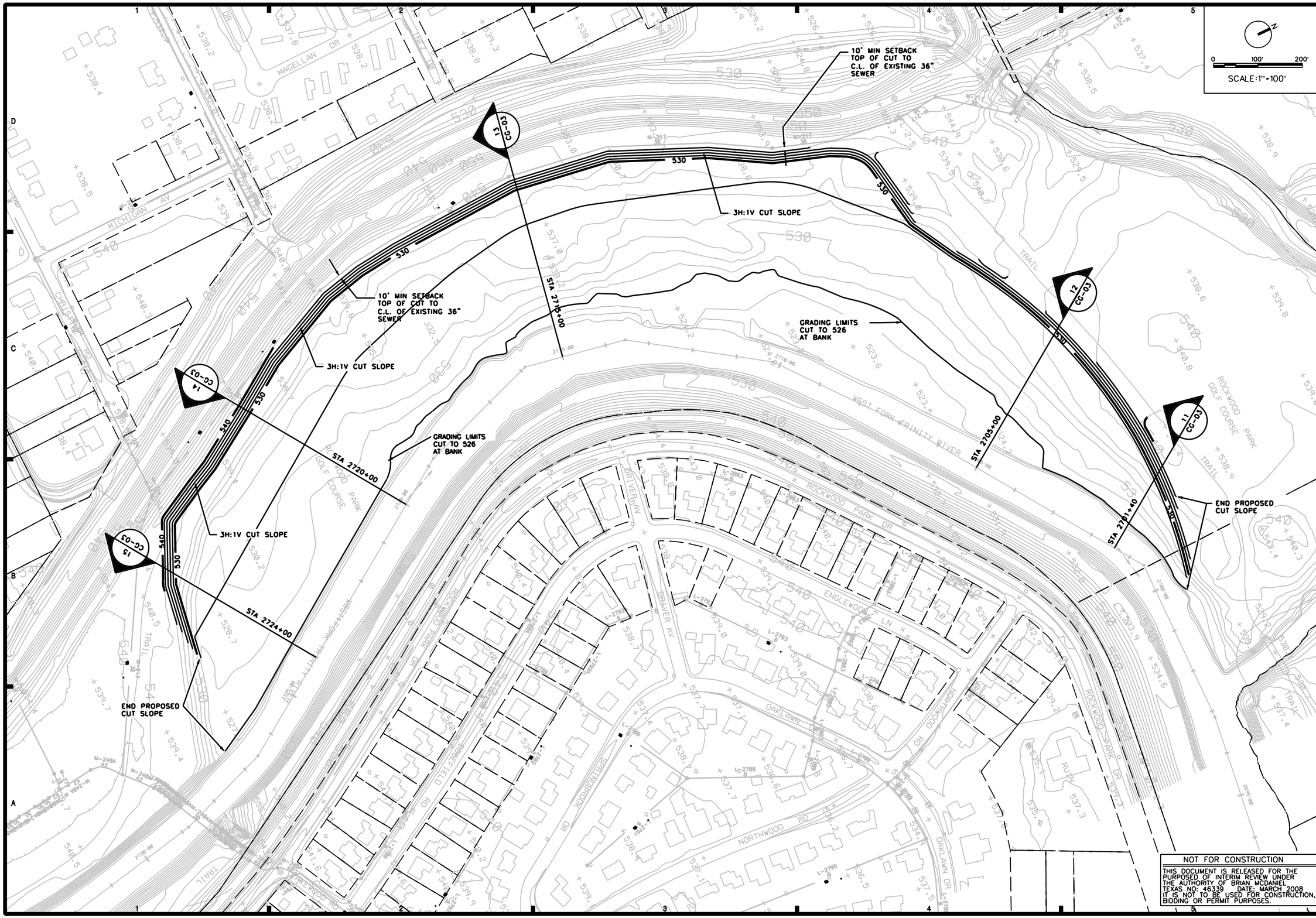
ARS Engineers, Inc.

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
ROCKWOOD PARK - WEST (SITE 2)

SHEET IDENTIFICATION
CG-01



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US Army Corps of Engineers
Fort Worth District

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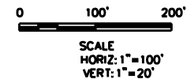
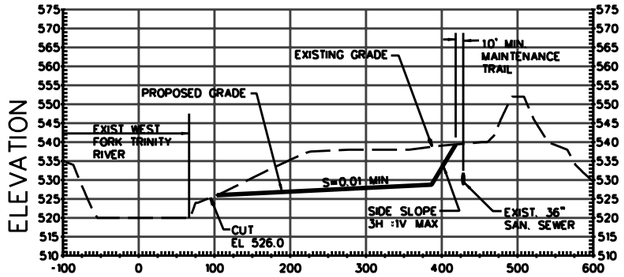
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
ROCKWOOD PARK - WEST (SITE 2)

SHEET IDENTIFICATION

CG-02





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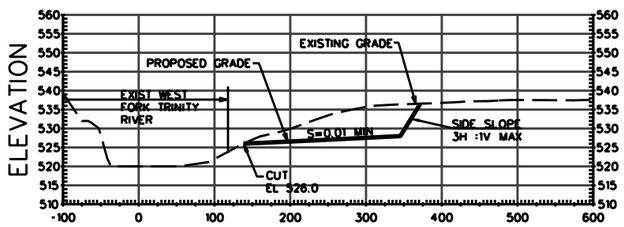

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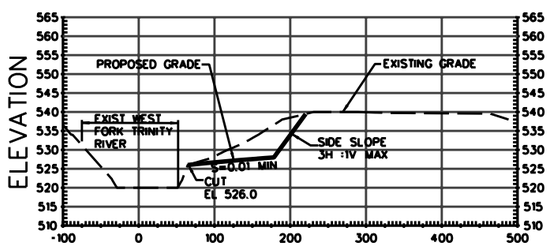

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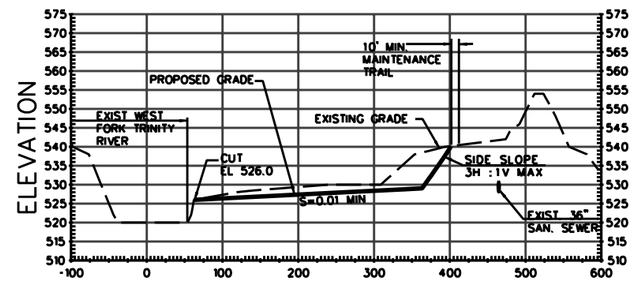

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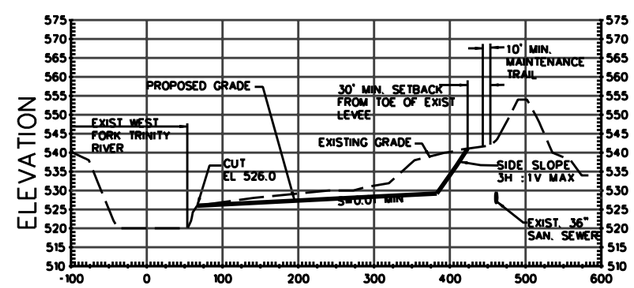

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SITE 2

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Fort Worth District

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Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
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License Number: 46339
License State: TEXAS

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
ROCKWOOD WEST PARK (SITE 2)

SHEET IDENTIFICATION
CG-03

NOTE

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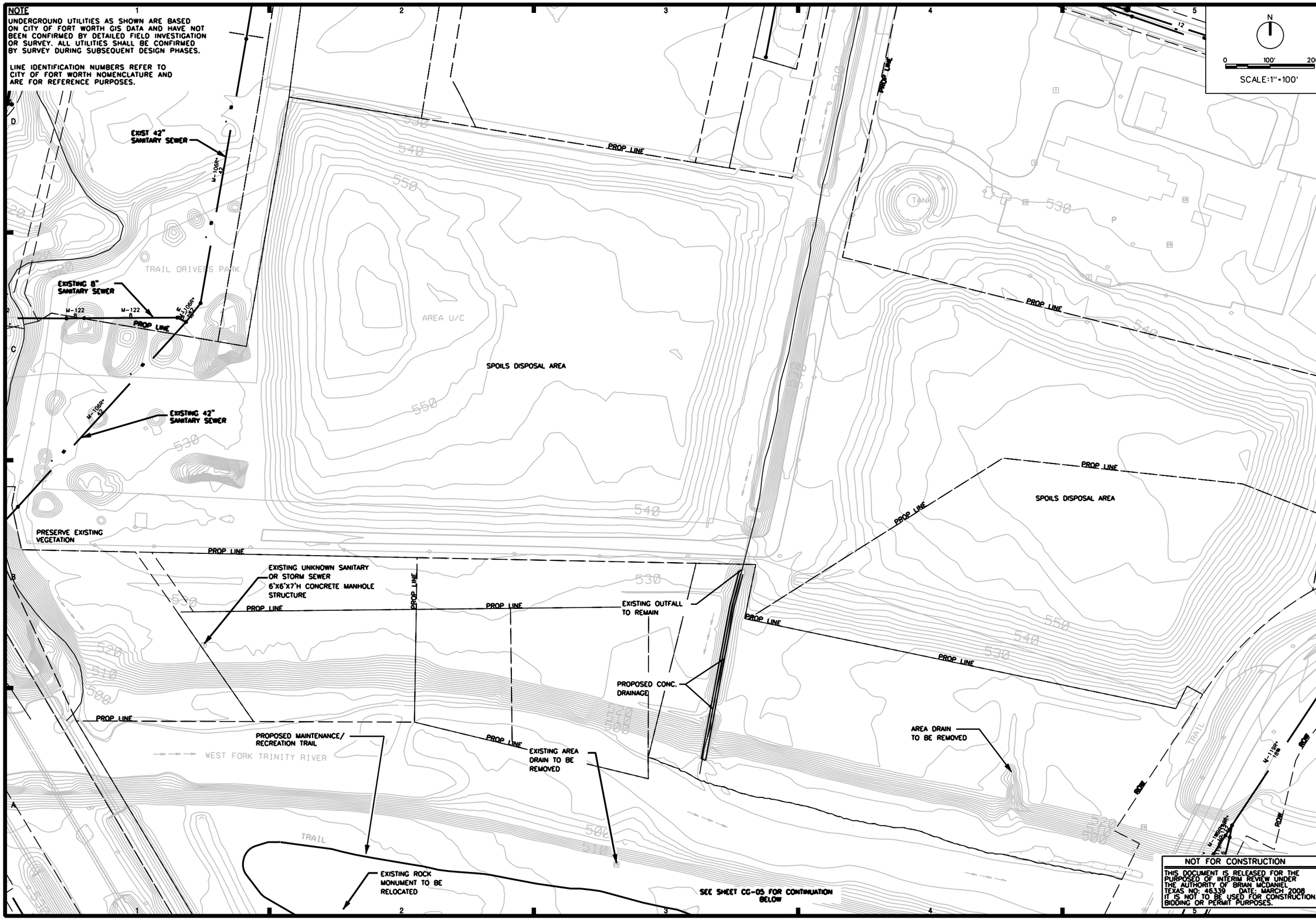

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US Army Corps of Engineers Fort Worth District

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Set ID: SetID
Size: ANSI D
Plot date: Plotdate
Designed by: C. PAUL
Drawn by: C. PAUL
Checked by: C. PAUL
Responsible P.E.: B. McDANIEL
License Number: 46339
License State: TEXAS

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Arlington, Texas 76015
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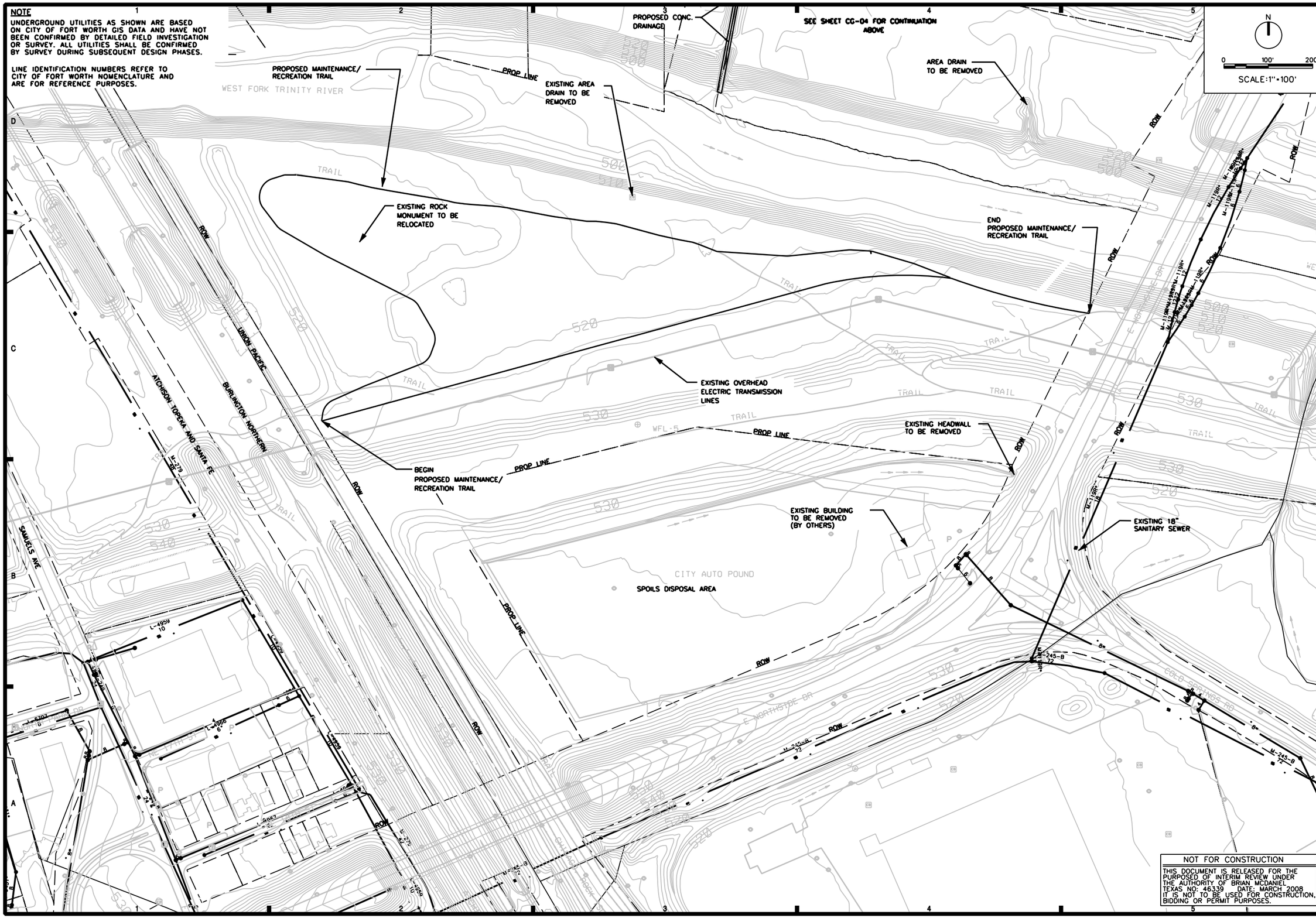
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
SAMUELS AVENUE (SITE 5A)

SHEET IDENTIFICATION

CG-04



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US Army Corps of Engineers
Fort Worth District

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Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: B. McDANIEL
License Number: 46339
License State: TEXAS

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
SAMUELS AVENUE (SITE 5C)

SHEET IDENTIFICATION
CG-05

NOTE

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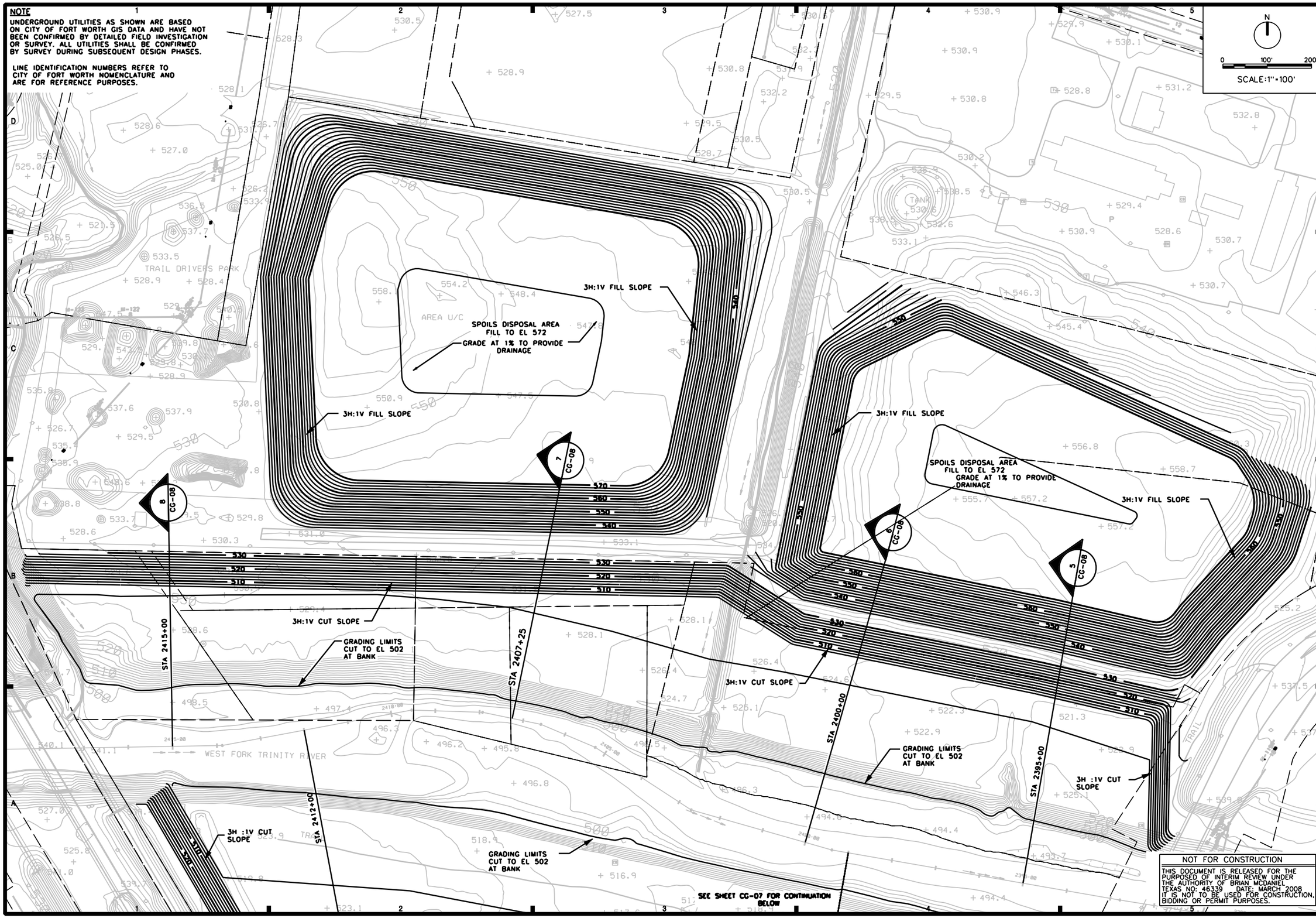

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design File: 07030_CFW_CG-106.dgn
Set ID: SetID
Size: ANSI D
Plot date: Plotdate
Designed by: C. PAUL
Drawn by: R. HOWARD
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Responsible P.E.: B. McDANIEL
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Horizontal Scale: TEXAS

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2000 S. Great Southwest Pkwy, Ste 100
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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
SAMUELS AVENUE (SITE 5A)

SHEET IDENTIFICATION

CG-06

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NOTE

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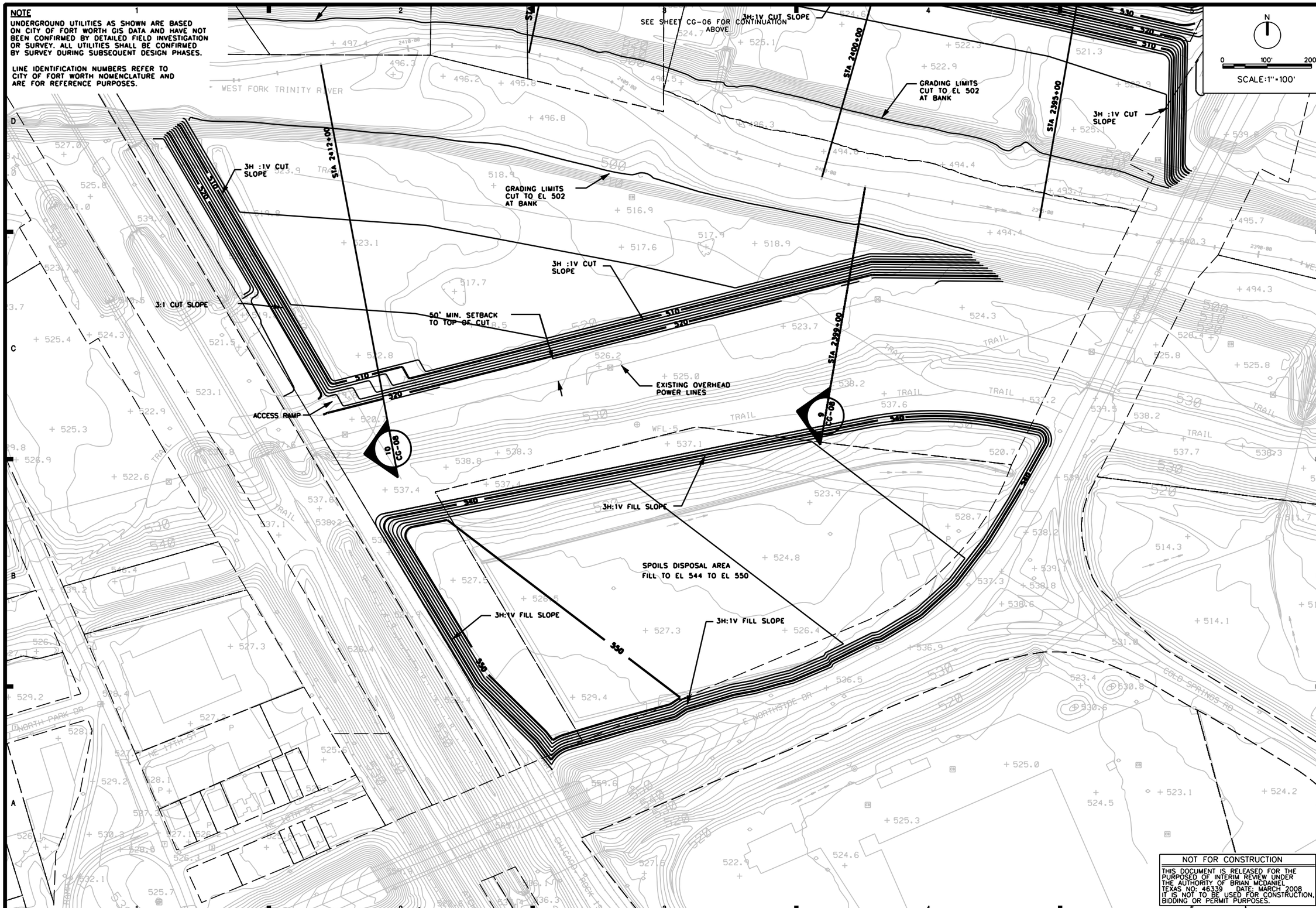

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US Army Corps of Engineers
Fort Worth District

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Designed by: C. PAUL
Drawn by: R. BOSS
Checked by: C PAUL
Responsible P.E.: B. MCDANIEL
License number: 46339
License state: TEXAS

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3900 N. Linear Court, Suite 100
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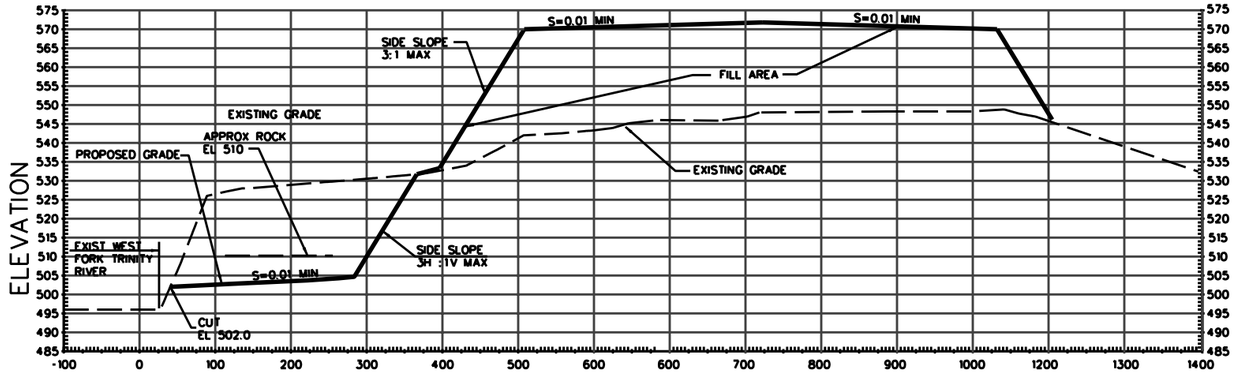
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
SAMUELS AVENUE (SITE 5C)

SHEET IDENTIFICATION

CG-07



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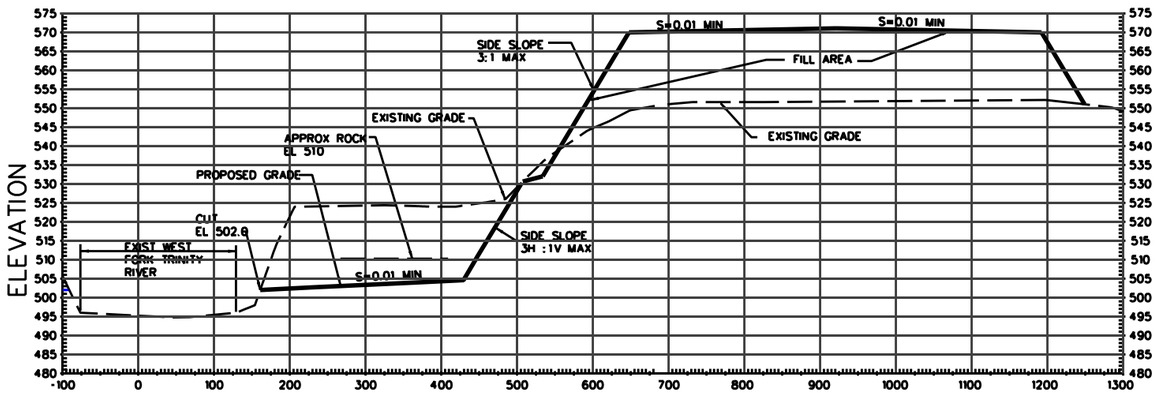

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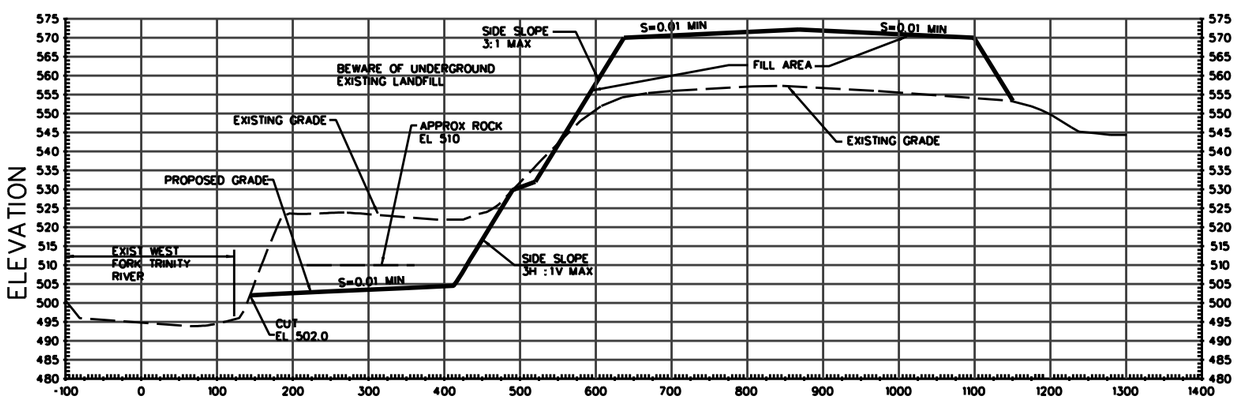

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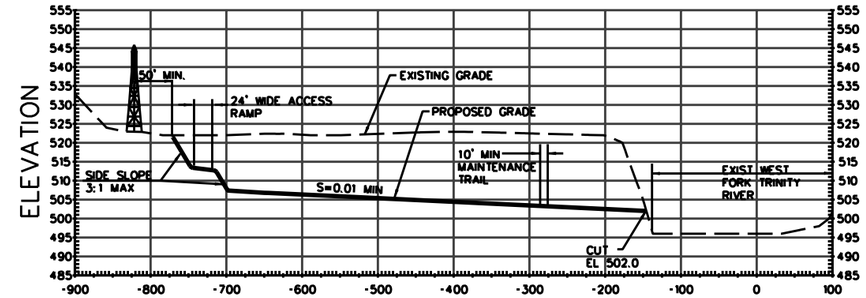

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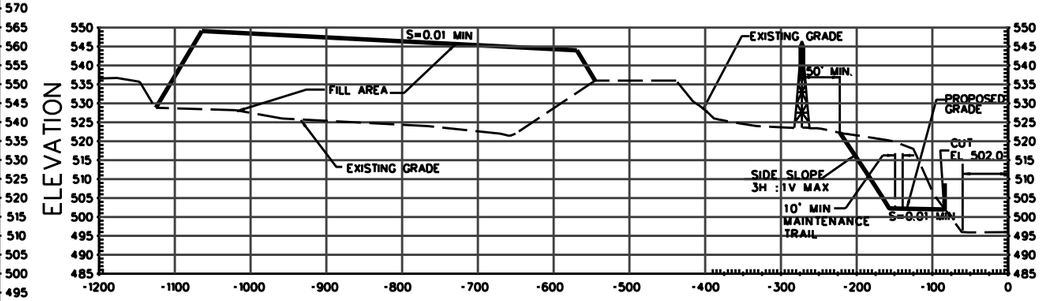

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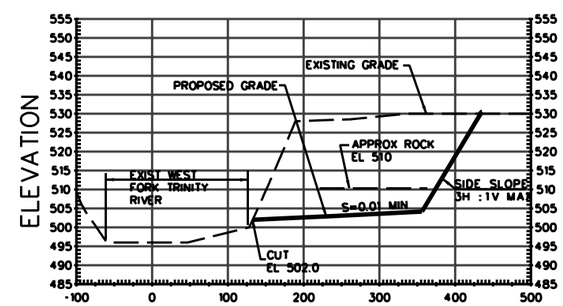

SECTION STA. 2415+00.00 (8)

SITE 5a / 5c

0 100' 200'
SCALE
HORIZ: 1"=100'
VERT: 1"=20'

NOT FOR CONSTRUCTION
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US Army Corps of Engineers
Fort Worth District

Symbol | Description | Date | Appr.

Design file: Designfile
Set ID.: SetID
Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
License State: TEXAS

CDM
ARS Engineers, Inc.

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
SAMUELS AVENUE (SITE 5A & 5C)

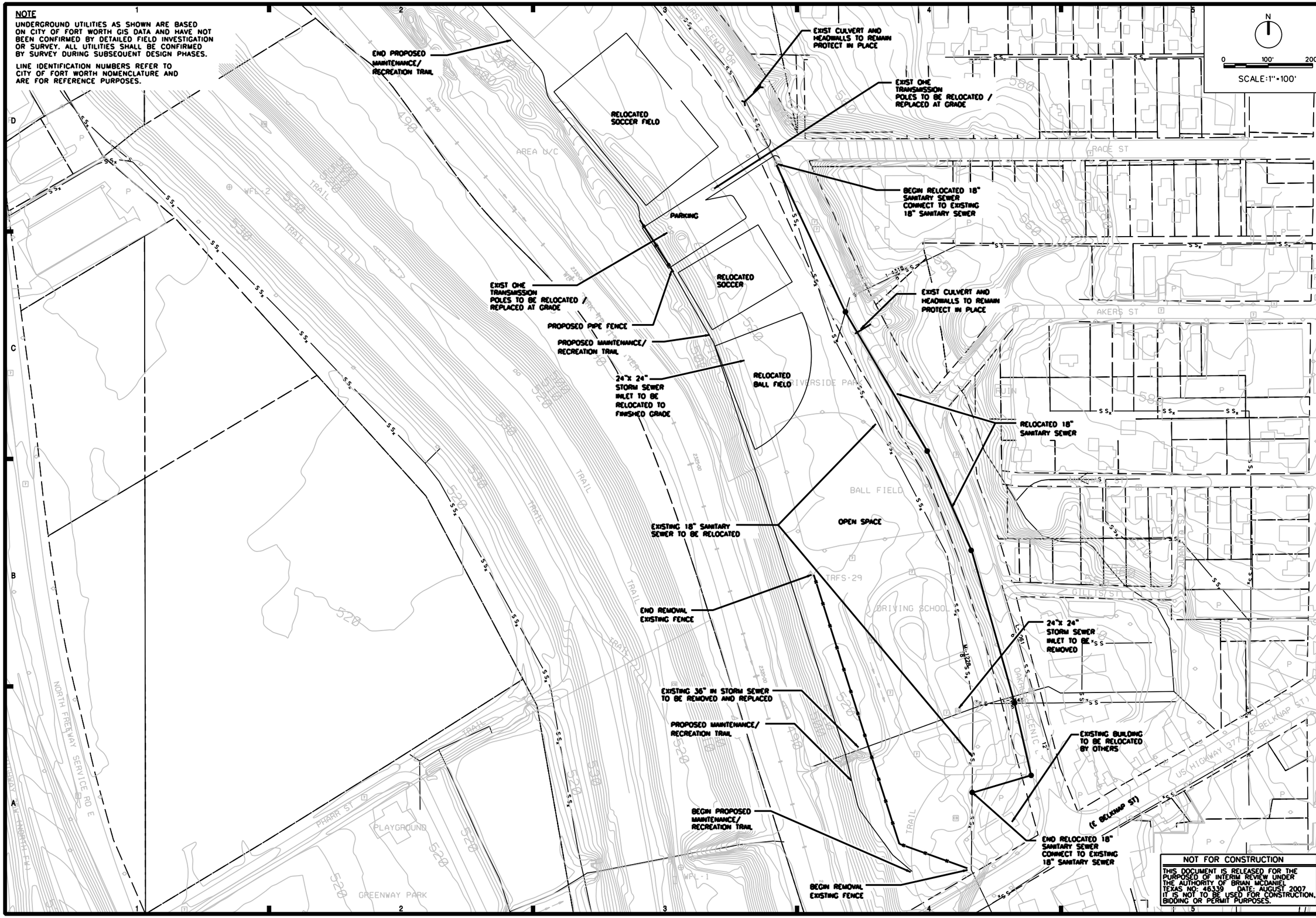
SHEET IDENTIFICATION
CG-08

...\ARS\07030_CFW_CG-108xx08.dgn 3/8/2008 2:35:06 PM

NOTE

UNDERGROUND UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.

LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.



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US Army Corps of Engineers
Fort Worth District

Approved	Date	Description	Symbol

Design File: 07020_CFW_CG-109.dgn
Set ID: SetID
Size: ANSI D
Plot date: Plotted on Nov 14, 2007
Designed by: C. PAUL
Drawn by: R. MARTINEZ
Checked by: C.PAUL
Responsible P.E.: B. McDANIEL
License Number: 46339
License State: TEXAS

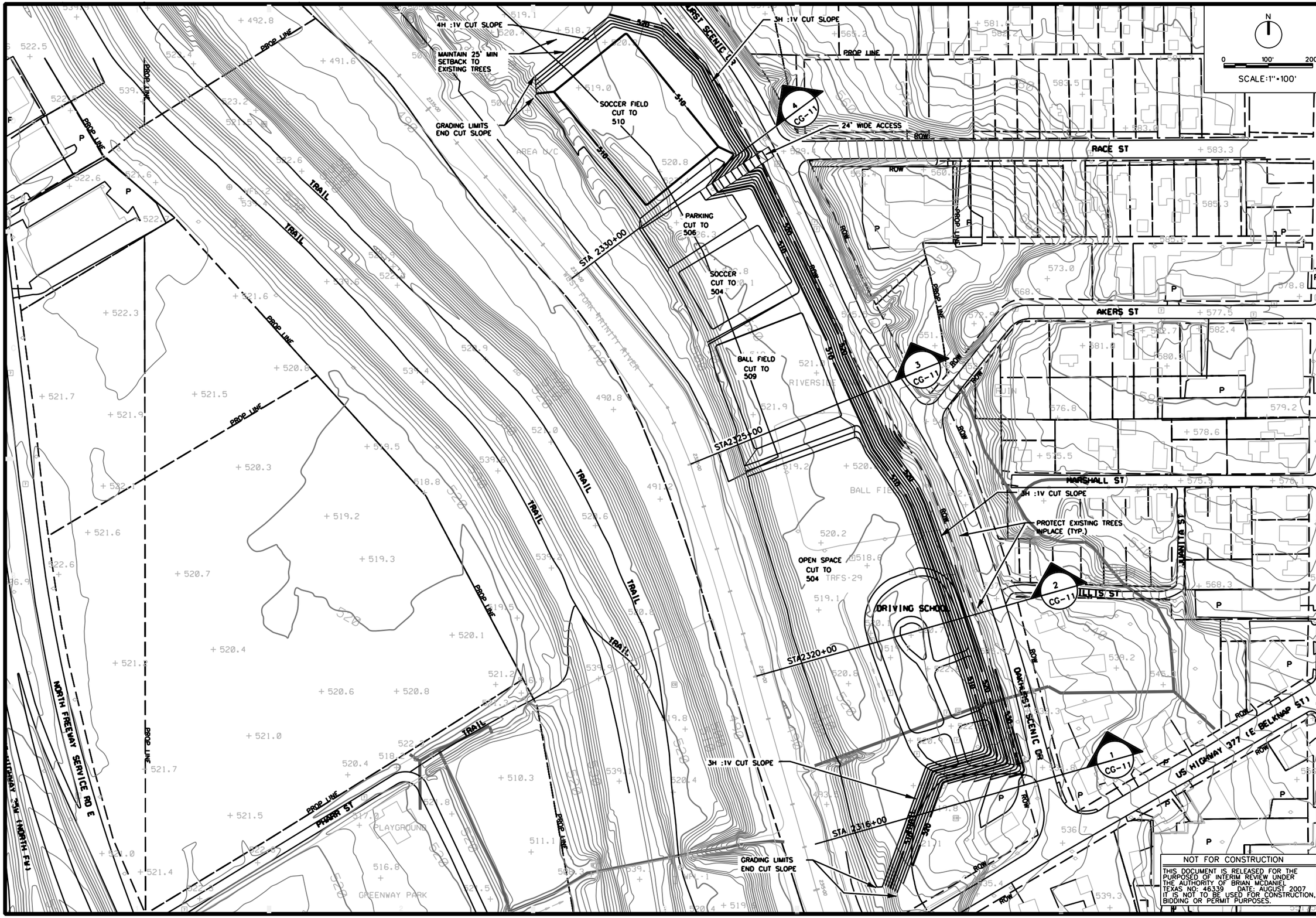
CDM

ARS Engineers Inc.
3400 N. Green Oaks Blvd. Suite 100
Arlington, Texas 76016
(817) 735-7316 Fax (817) 735-7318

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
RIVERSIDE PARK (SITE 21)

SHEET IDENTIFICATION

CG-09



US Army Corps of Engineers
Fort Worth District

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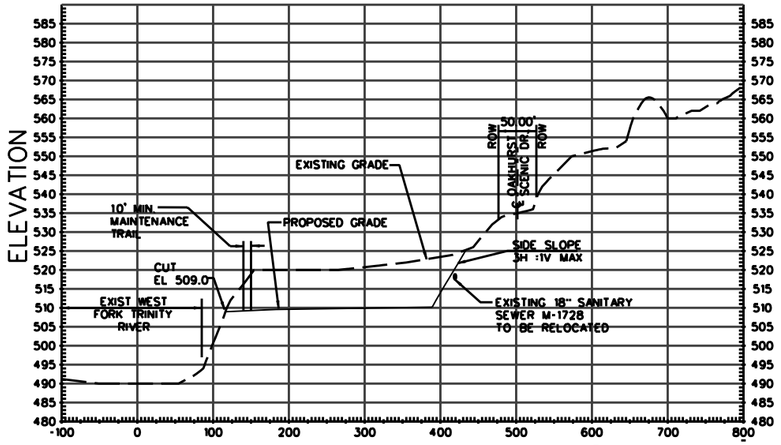
Plot date: Plotdate
Designed by: C. PAUL
Drawn by: A. MARTINEZ
Checked by: C. PAUL
Responsible P.E.: B. McDANIEL
License Number: 46339
License State: TEXAS

CDM
ARS Engineers Inc.
9800 N. Central Expwy., Suite 1000
Dallas, Texas 75231
(214) 230-2200 FAX (214) 739-3199

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
RIVERSIDE PARK (SITE 21)

SHEET IDENTIFICATION
CG-10



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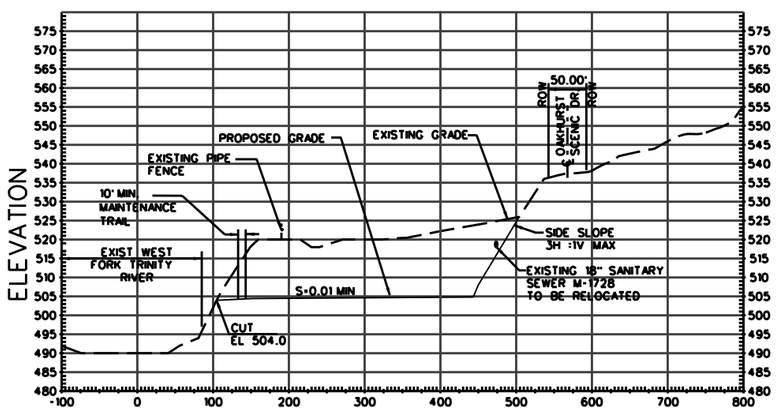

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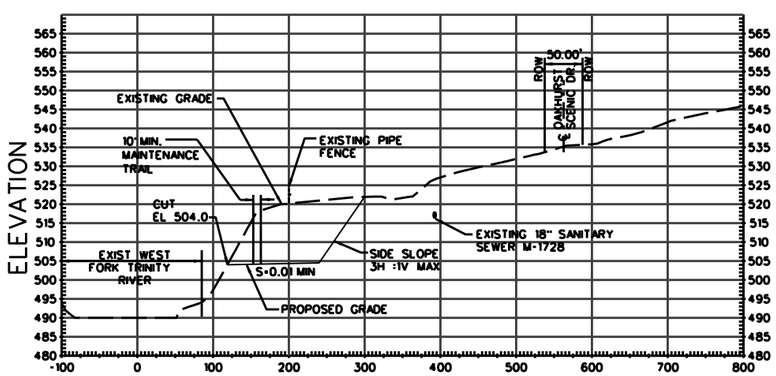

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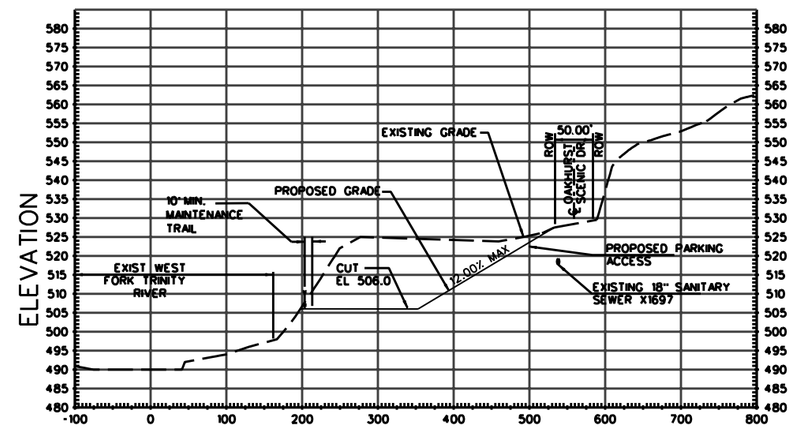
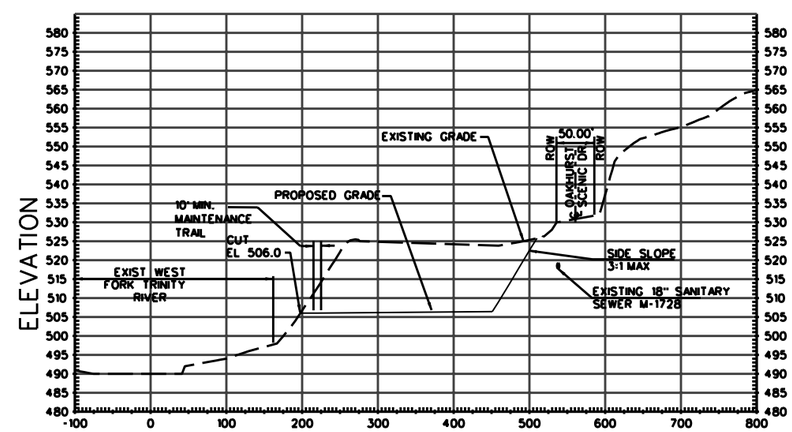


PROFILE PARKING LOT DRIVEWAY



SECTION STA. 2330+00.00 (4)

SITE 21

0 100' 200'
SCALE
HORIZ: 1"=100'
VERT: 1"=20'

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US Army Corps of Engineers
Fort Worth District

Symbol | Description | Date | Appr.

Design file: Designfile
Set ID: SetID
Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
License State: TEXAS

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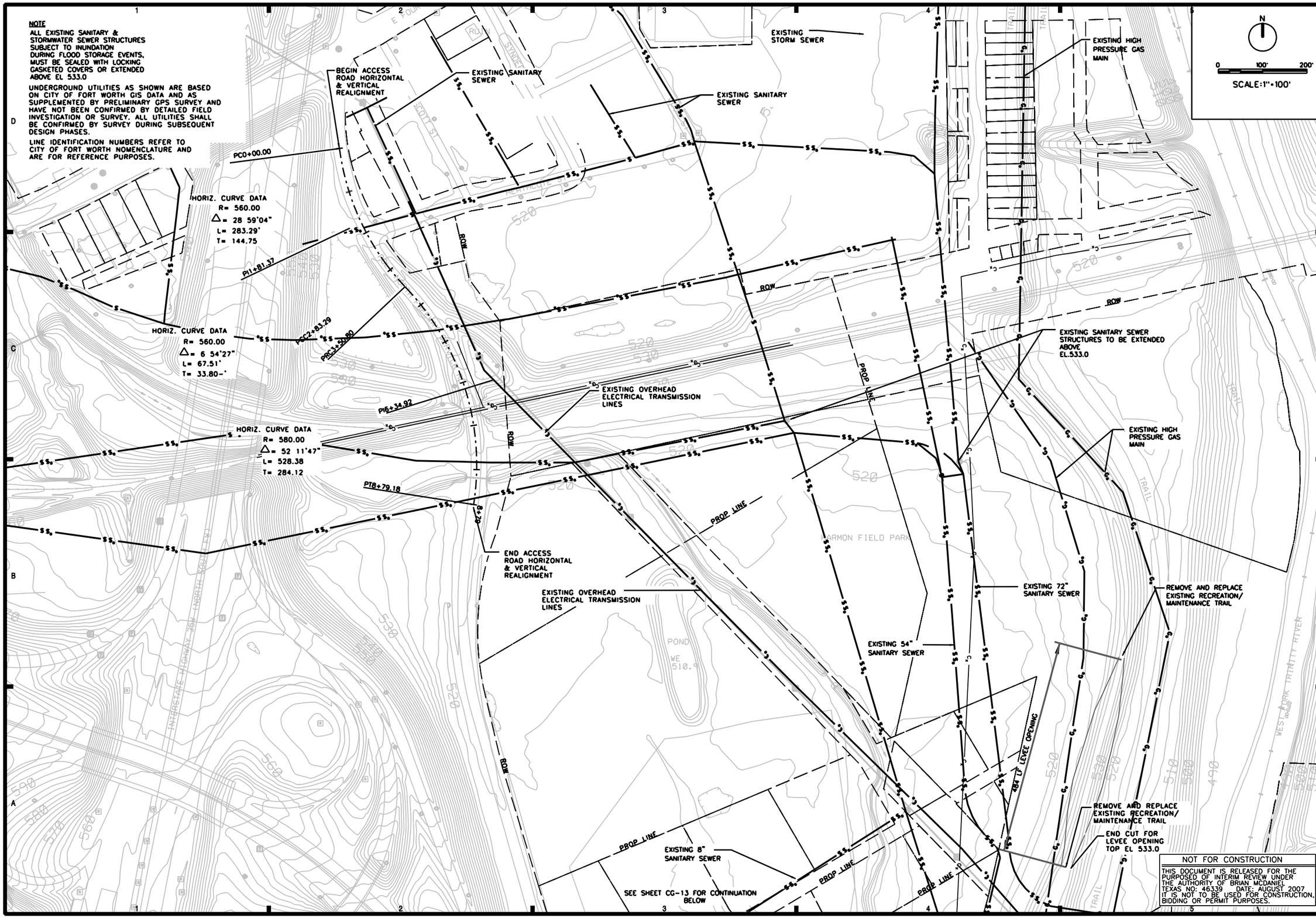
ARS Engineers, Inc.

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
RIVERSIDE PARK (SITE 21)

SHEET IDENTIFICATION
CG-11



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: Usegrafile
Set ID: SetID
Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: C. PAUL
Checked by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
License State: TEXAS

CDM
ARS ENGINEERS, INC.
9400 N. Central Expwy., Suite 1300
Dallas, Texas 75231
(214) 739-2155 Fax (972) 788-1089

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
HAM BRANCH (SITE 9)

SHEET IDENTIFICATION
CG-12

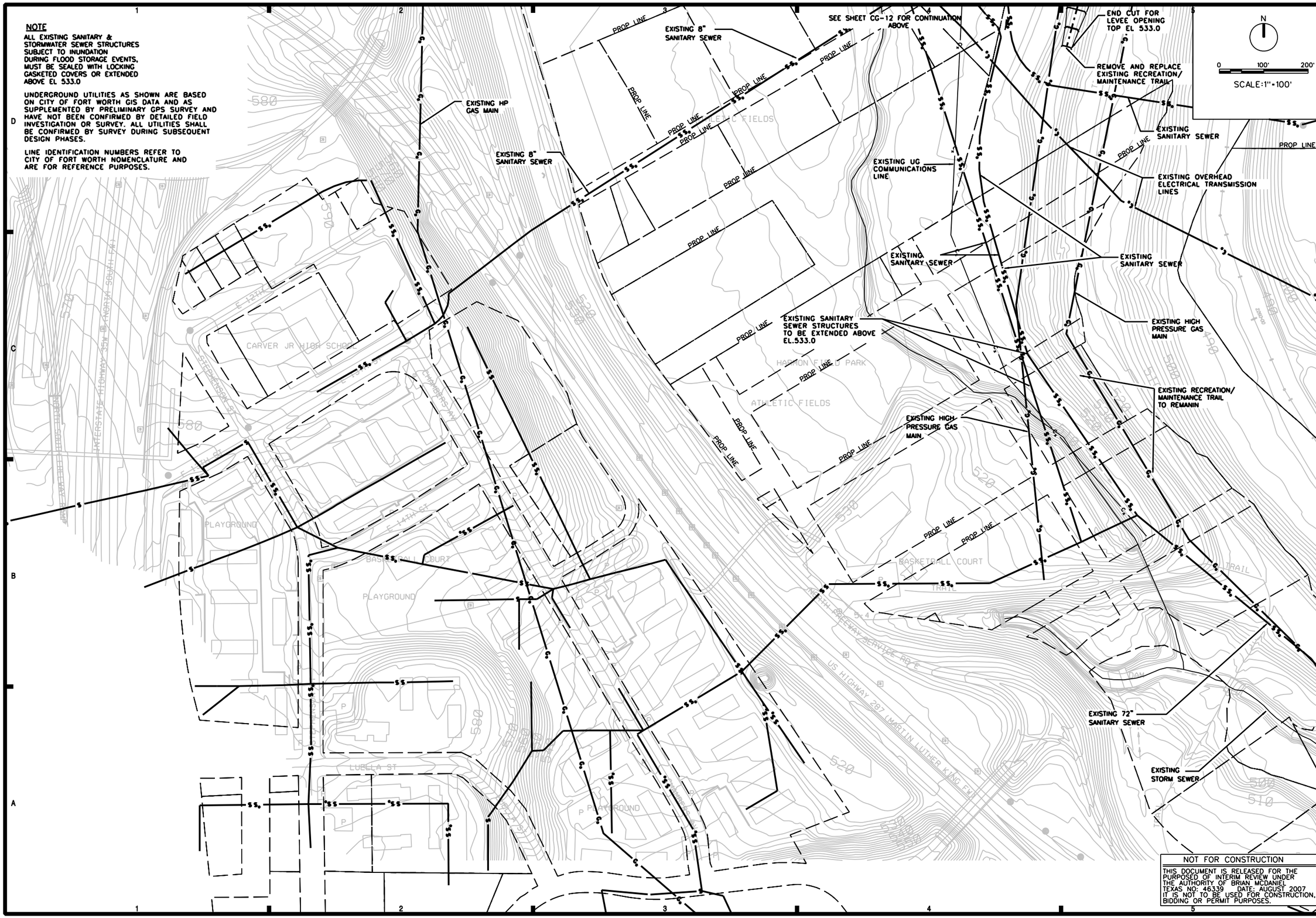
07010_CFW_CG-112xx12.dgn 11/14/2007 11:07:22 AM

NOTE

ALL EXISTING SANITARY & STORMWATER SEWER STRUCTURES SUBJECT TO INUNDATION DURING FLOOD STORAGE EVENTS, MUST BE SEALED WITH LOCKING GASKETED COVERS OR EXTENDED ABOVE EL 533.0

UNDERGROUND UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.

LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: DesignFile
Set ID: SetID
Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
LicenseState: TEXAS

CDM
ARS Engineers, Inc.

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CIVIL SITE PLAN
HAM BRANCH (SIRE 9)

SHEET IDENTIFICATION

CG-13

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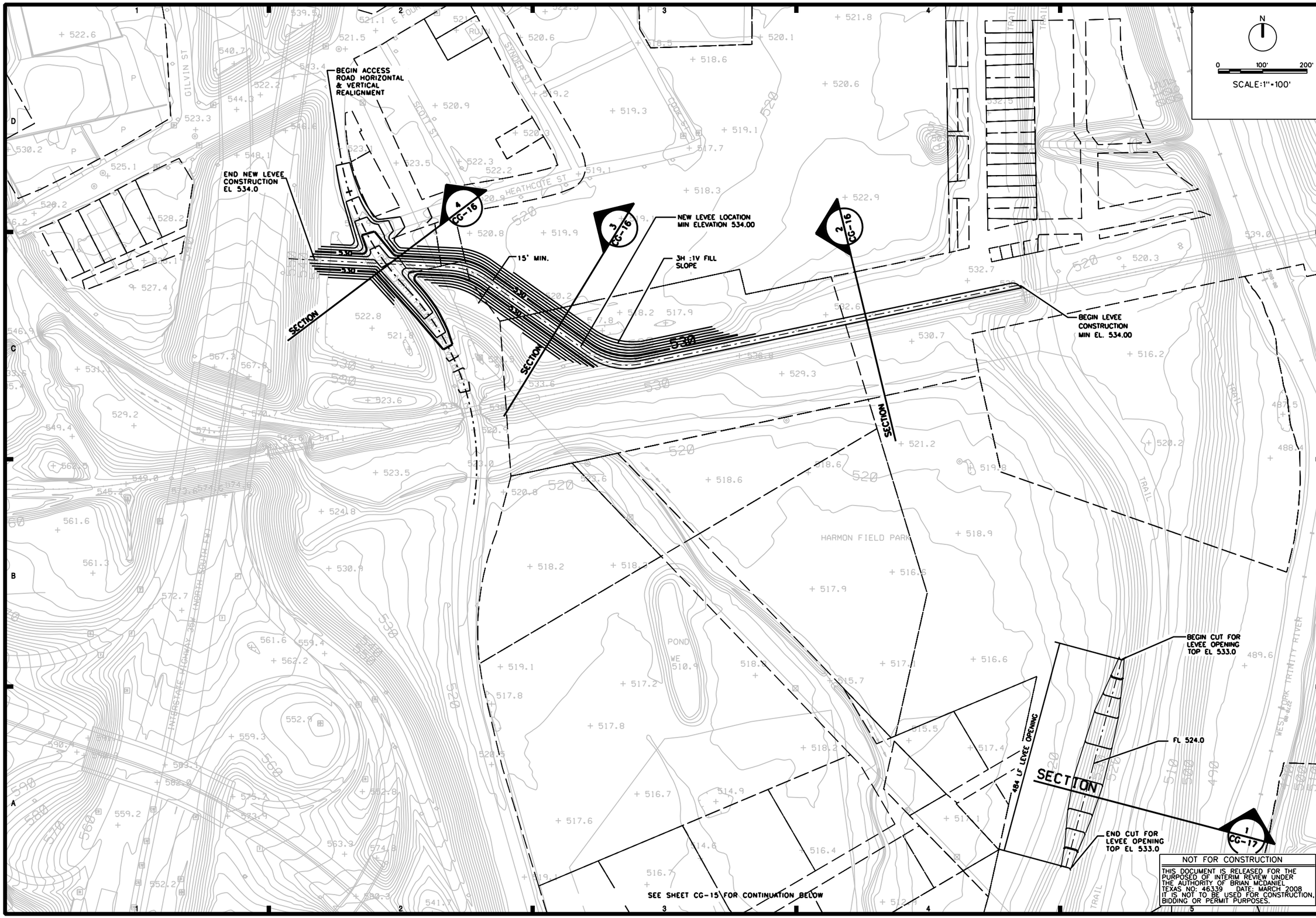

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: Design File
Set ID: SetID
Size: ANSI D
Plot date: PlotDate
Designed by: C. PAUL
Drawn by: B. EADS
Checked by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
License State: TEXAS

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
HAM BRANCH

SHEET IDENTIFICATION
CG-14

NOTE

ALL EXISTING SANITARY & STORMWATER SEWER STRUCTURES SUBJECT TO INUNDATION DURING FLOOD STORAGE EVENTS, MUST BE SEALED WITH LOCKING GASKETED COVERS OR EXTENDED ABOVE EL 533.0

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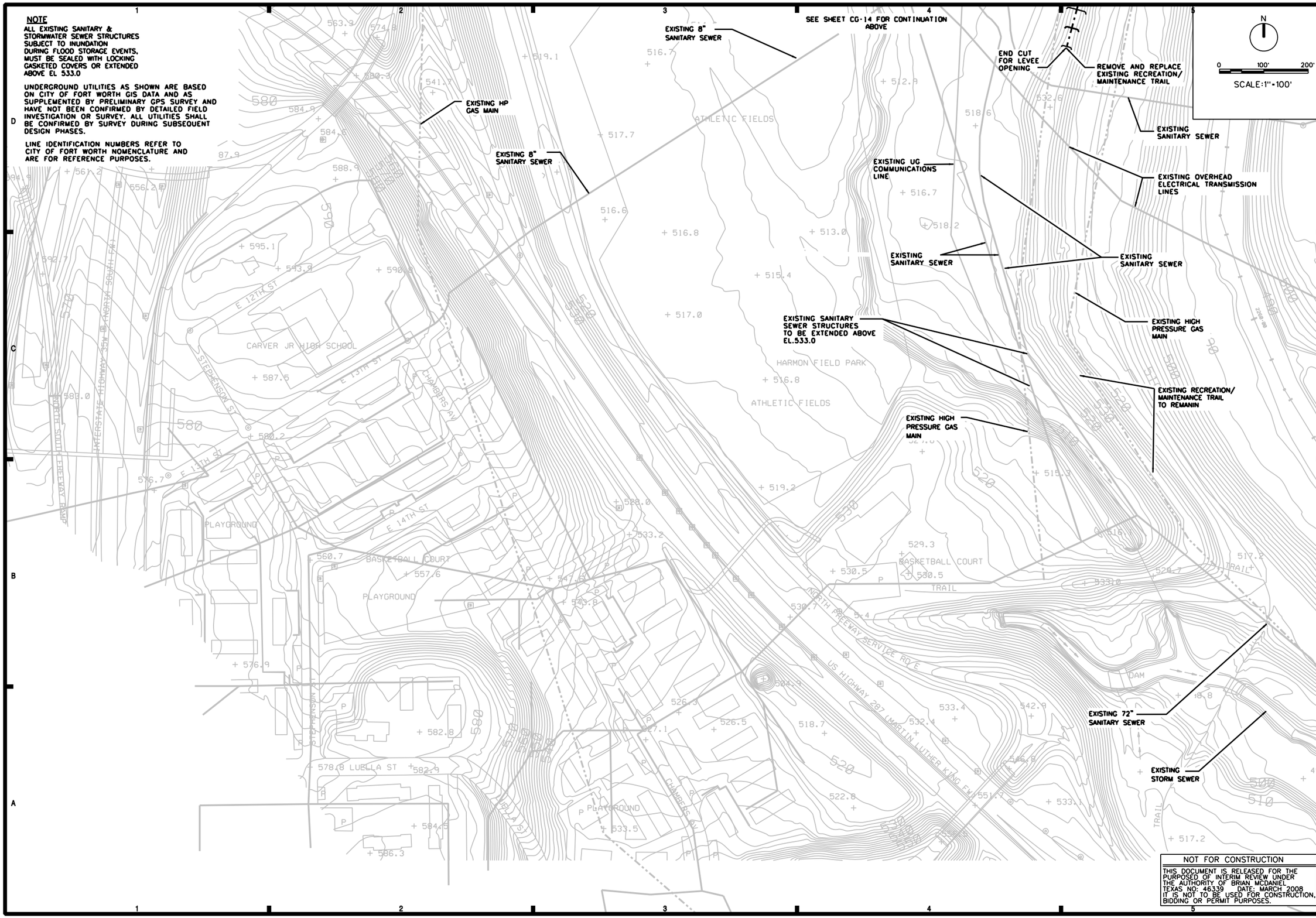
LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.



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US Army Corps of Engineers Fort Worth District

Symbol	Description	Date	Approved

Design Eng: Designer
Set ID: SetID
Size: ANSI D
Plot date: PlotDate
Designed by C. PAUL
Drawn by: TJWS
Checked by C. PAUL
Responsible P.E.: BRIAN A. MCDANIEL
License Number: 46339
Licensed State: TEXAS

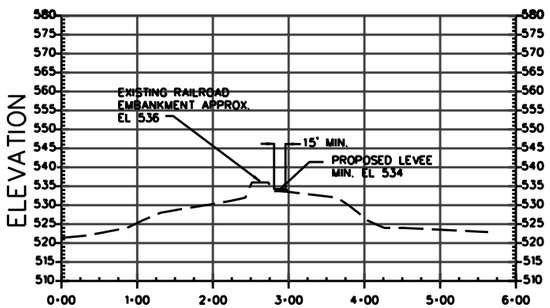
CDM

ARS Engineers, Inc.
2000 S. Cooper Street, Suite 100
Arlington, Texas 76013
(817) 299-1195 FAX (817) 299-1199

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
HAM BRANCH (SITE 9)

SHEET IDENTIFICATION

CG-15



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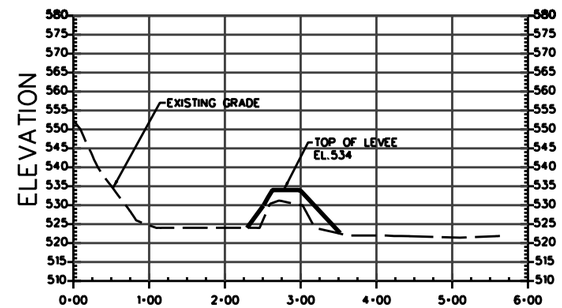

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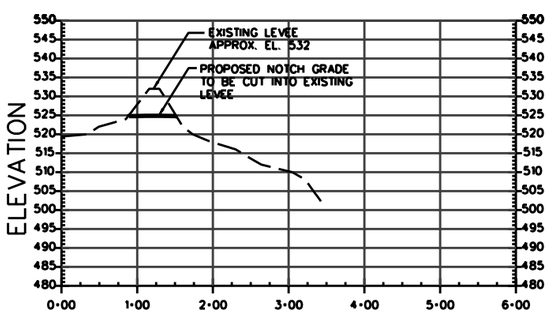

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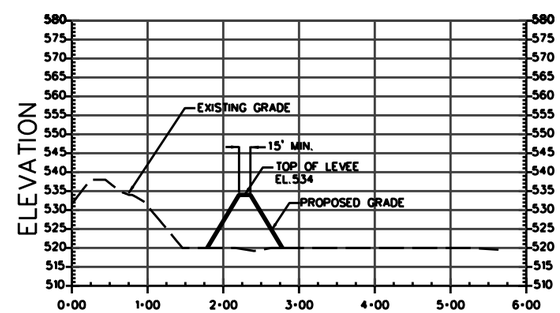

SECTION 3

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US Army Corps of Engineers Fort Worth District

Symbol	Description	Date	Appr.

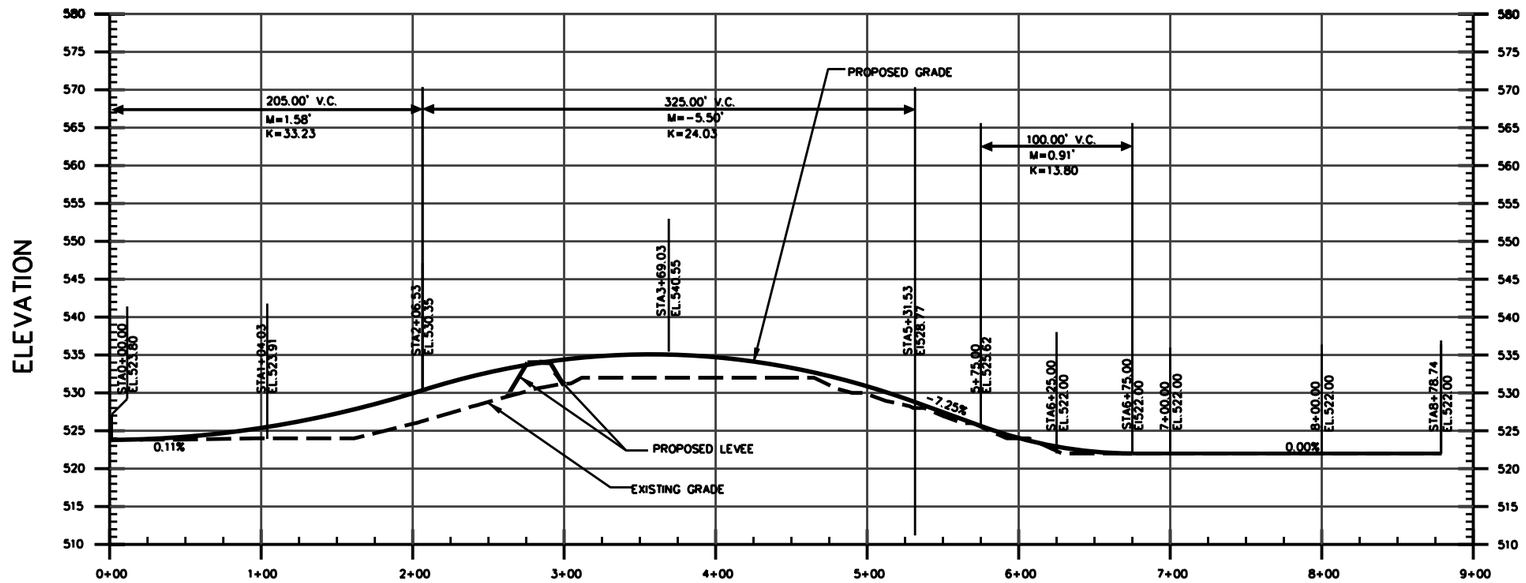
Usage: Fed. Designs
Set ID: SetD
Size: ANSI D
Plot date: Plotted on
Designed by: C. PAUL
Drawn by: S. LUGO
Created by: C. PAUL
Responsible P.E.: BRIAN A. McDANIEL
License Number: 46339
License State: TEXAS

CDM
ARS Engineers, Inc.
9800 S. Cooper Expressway, Suite 100
Grand Prairie, TX 75052
(214) 296-2700 FAX (972) 264-2444

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
HAM BRANCH (SITE 9)

SHEET IDENTIFICATION

CG-16



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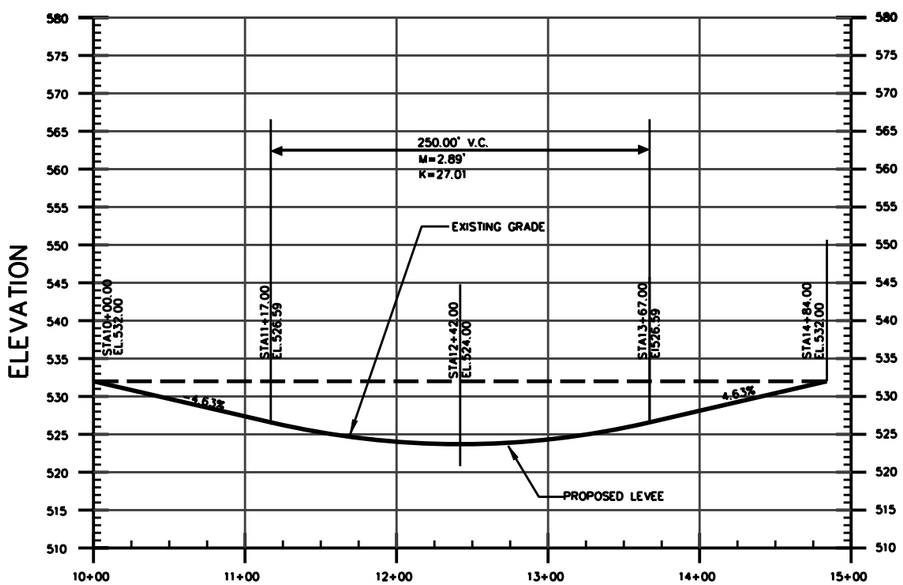

PROFILE LEVEE OPENING

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design File: Datagrafix
Set ID: SetID
Size: ANSI D
Plot date: Plotdate
Designed by: C. PAUL
Drawn by: C. PAUL
Checked by: C. PAUL
Responsible P.E.: BRIAN A. MCDANIEL
License Number: 46339
License State: TEXAS

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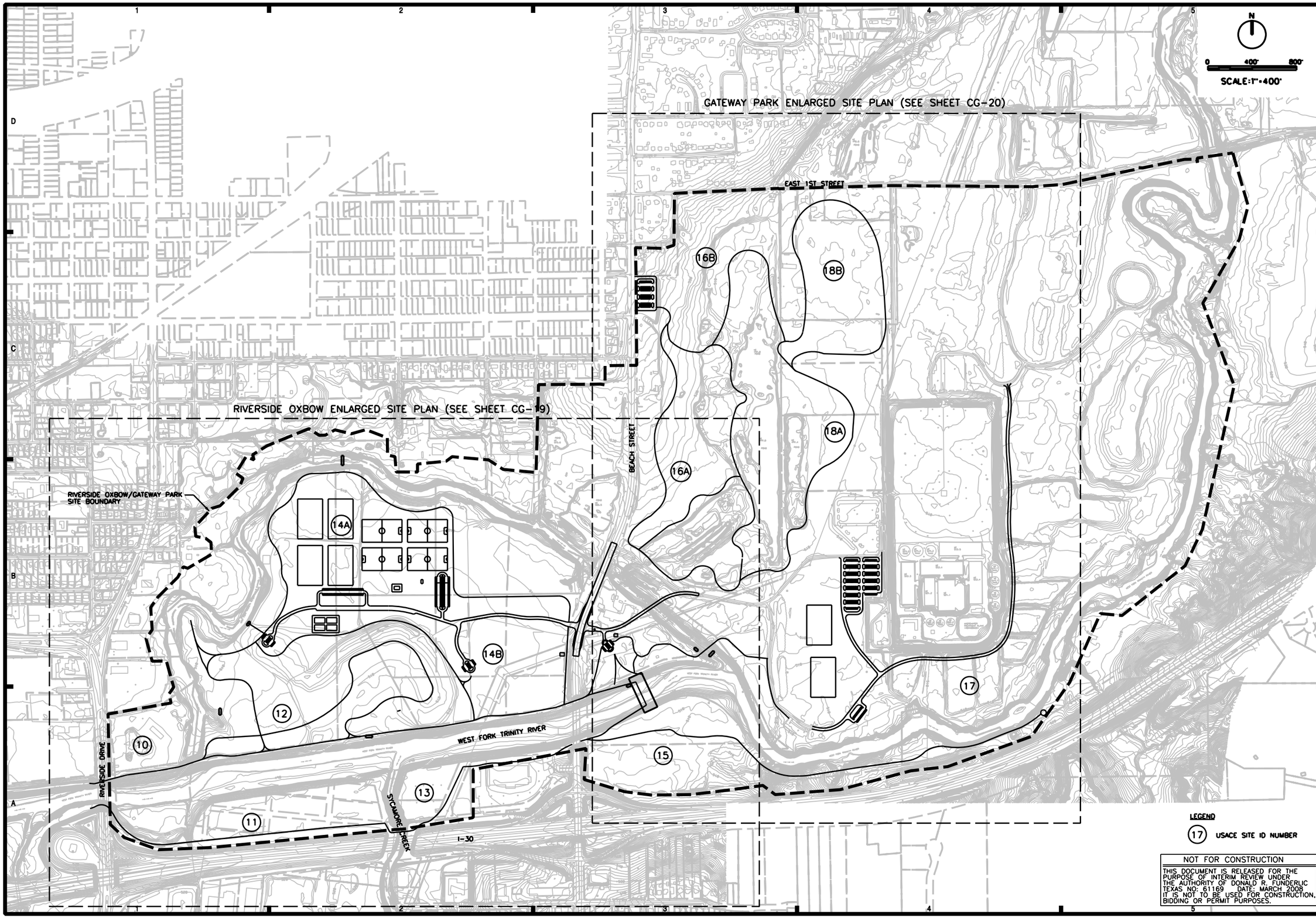
ARS Engineers
Dallas, Texas 75231-4388
(214) 298-2376 Fax (214) 739-3199

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PROFILE
HAM BRANCH (SITE 9)

SHEET IDENTIFICATION
CG-17



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: Design File
Set ID.: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PEState

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
SITE PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-18

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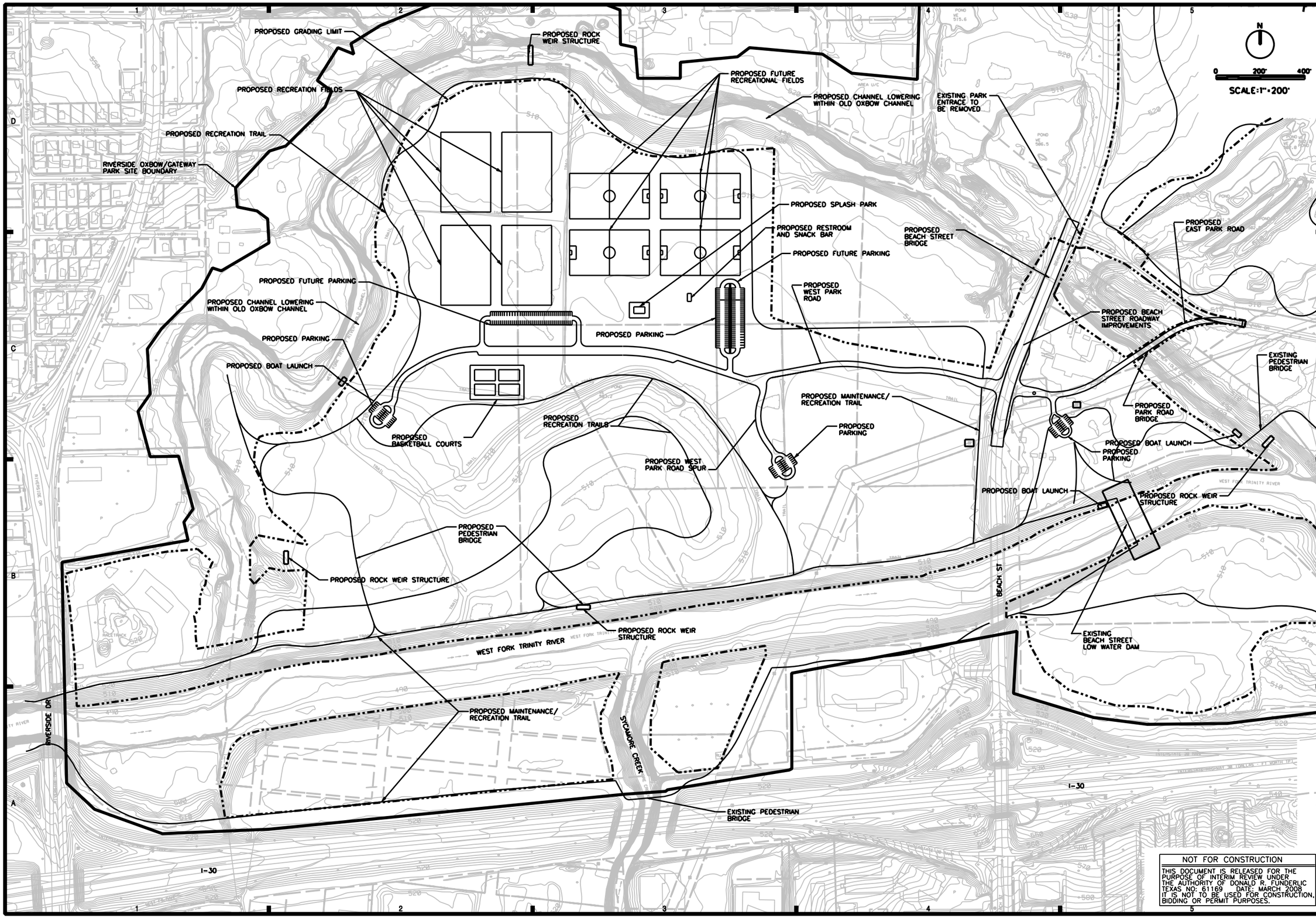

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: Designfile
Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
License State: PESlate

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
RIVERSIDE OXBOW ENLARGED PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-19

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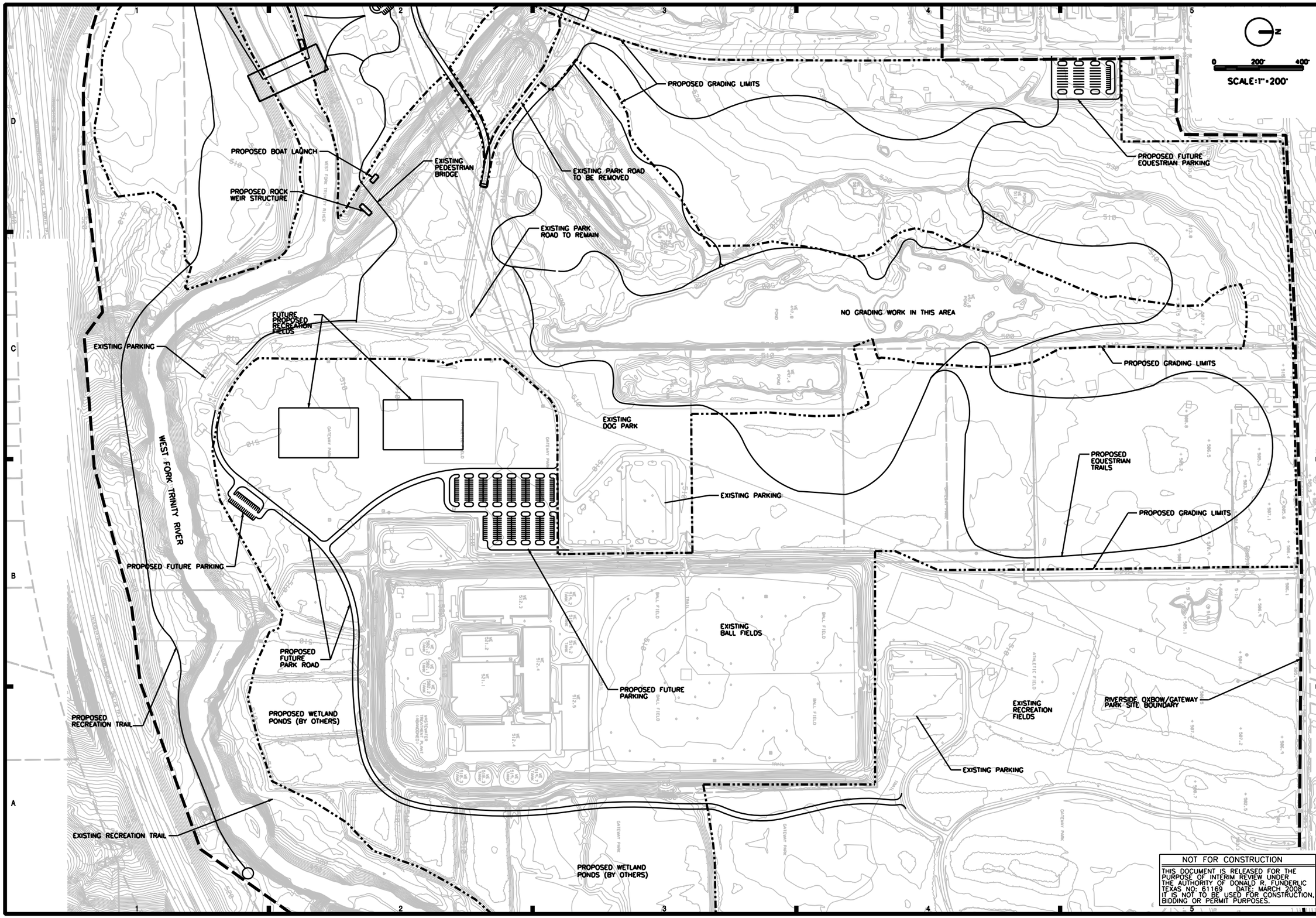

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US Army Corps of Engineers
Fort Worth District

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Design file: DesignFile
Set ID.: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PEState

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GATEWAY PARK ENLARGED PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-20

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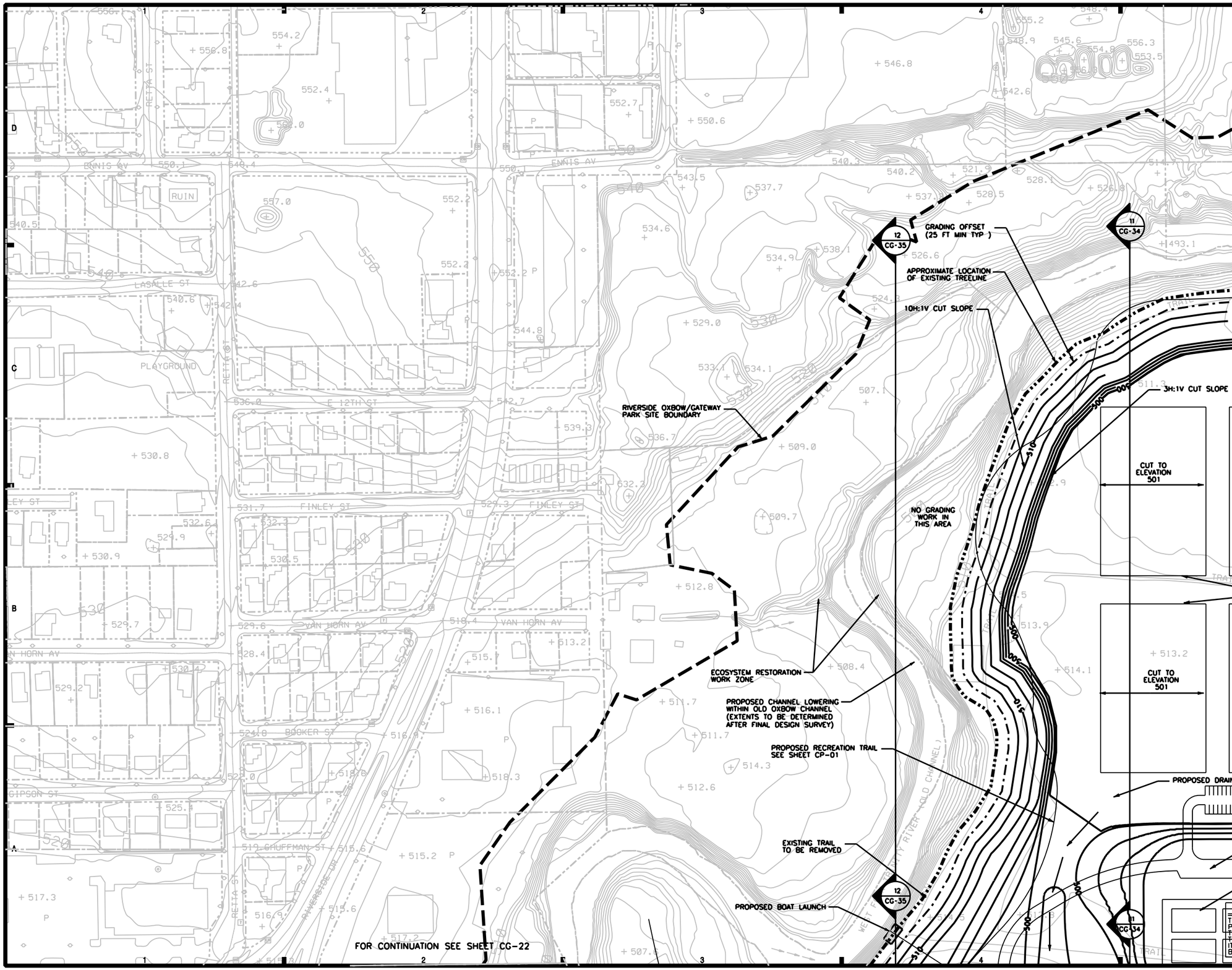

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US Army Corps of Engineers
Fort Worth District

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Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
License State: PESlate

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-21

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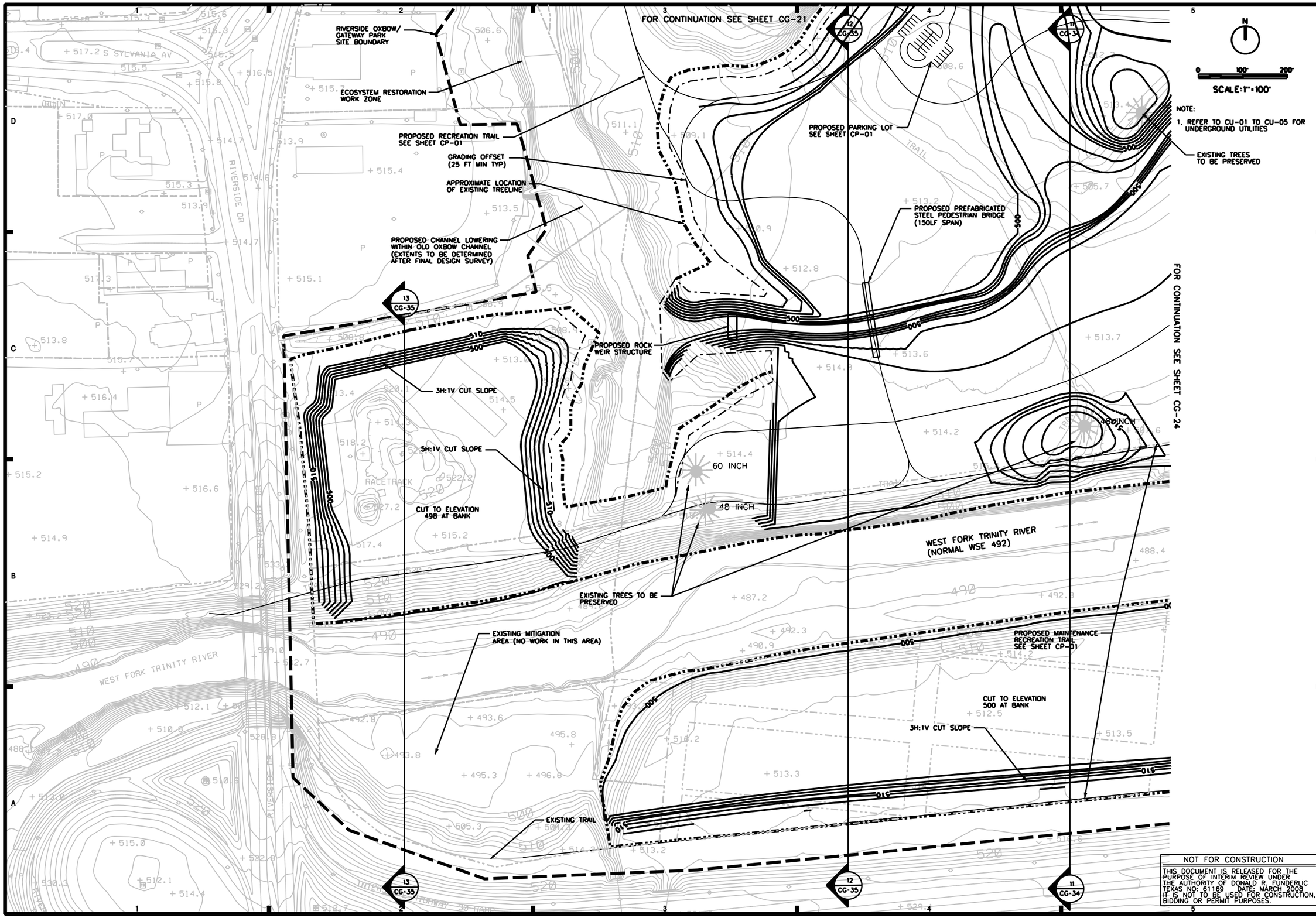

NOTE:
1. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES

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US Army Corps of Engineers Fort Worth District

CDM

Design file: Design File
Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION
CG-22

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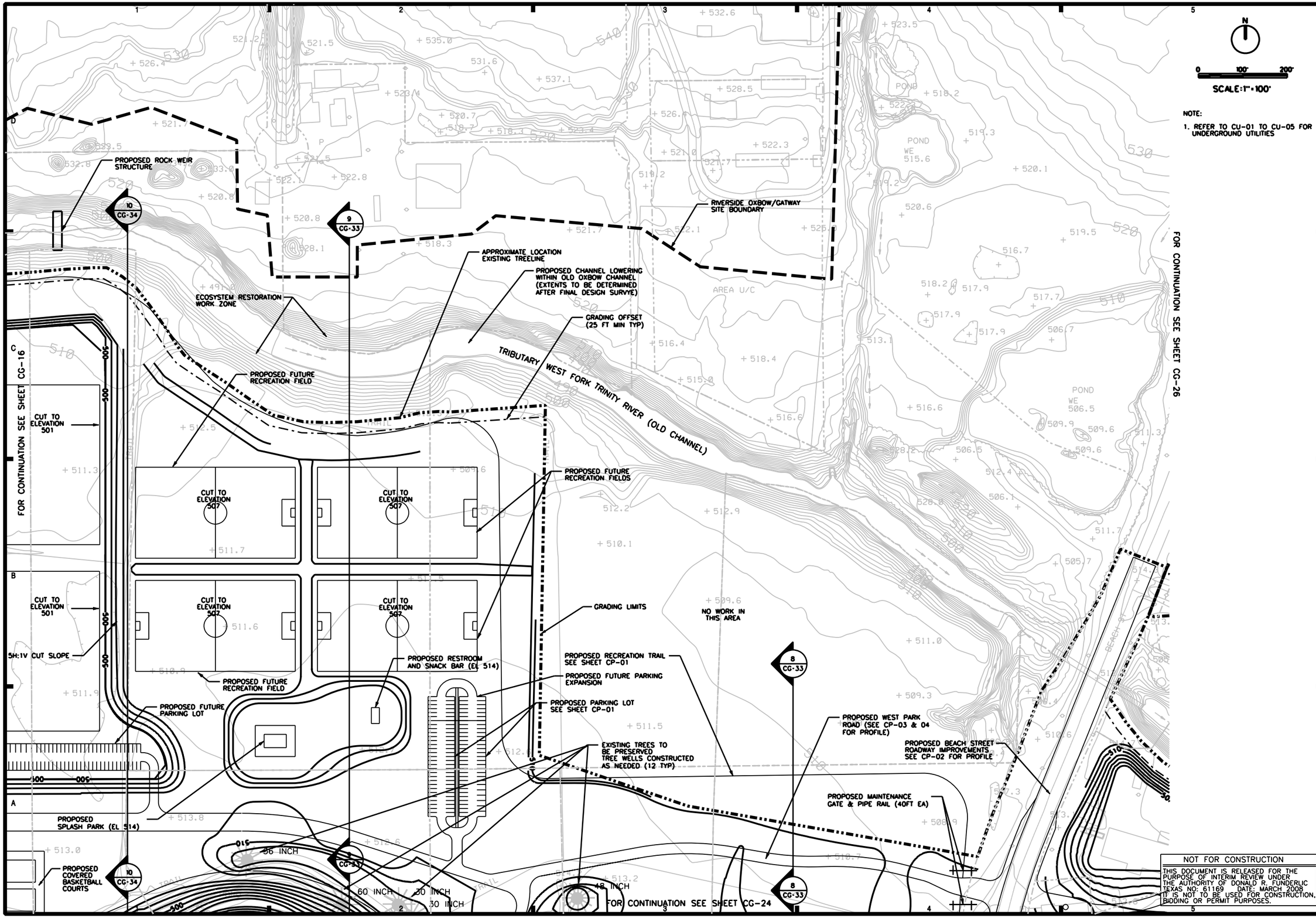

N

0 100' 200'

SCALE: 1" = 100'

NOTE:

1. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES

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US Army Corps of Engineers
Fort Worth District

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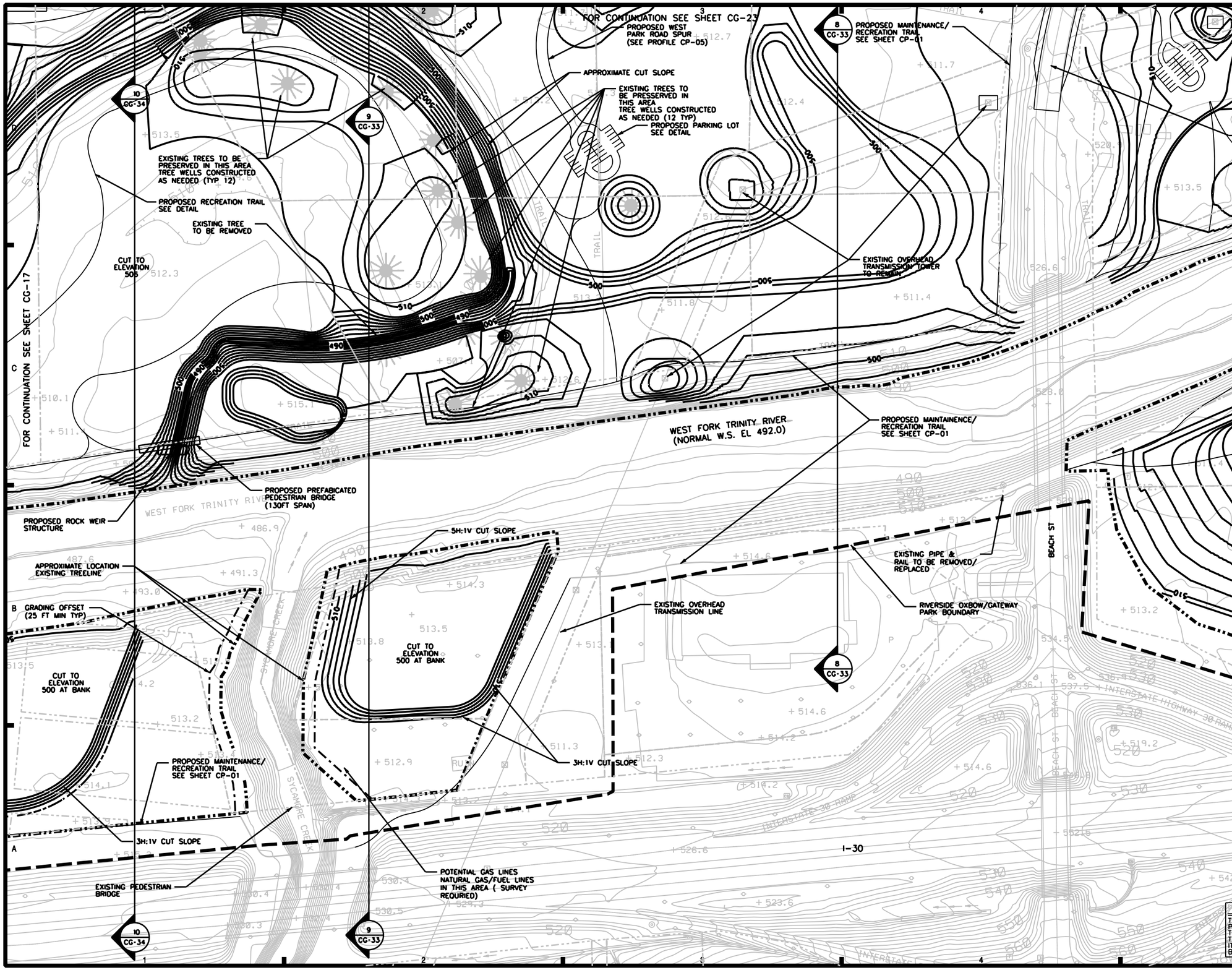
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
GATEWAY-OXBOW SITE

SHEET IDENTIFICATION

CG-23



N

0 100' 200'

SCALE: 1" = 100'

NOTE:

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US Army Corps of Engineers
Fort Worth District

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License Number: PELicenseNum
LicenseState: PEState

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-24

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SCALE: 1" = 100'

NOTE:

1. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES

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US Army Corps of Engineers
Fort Worth District

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Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-25

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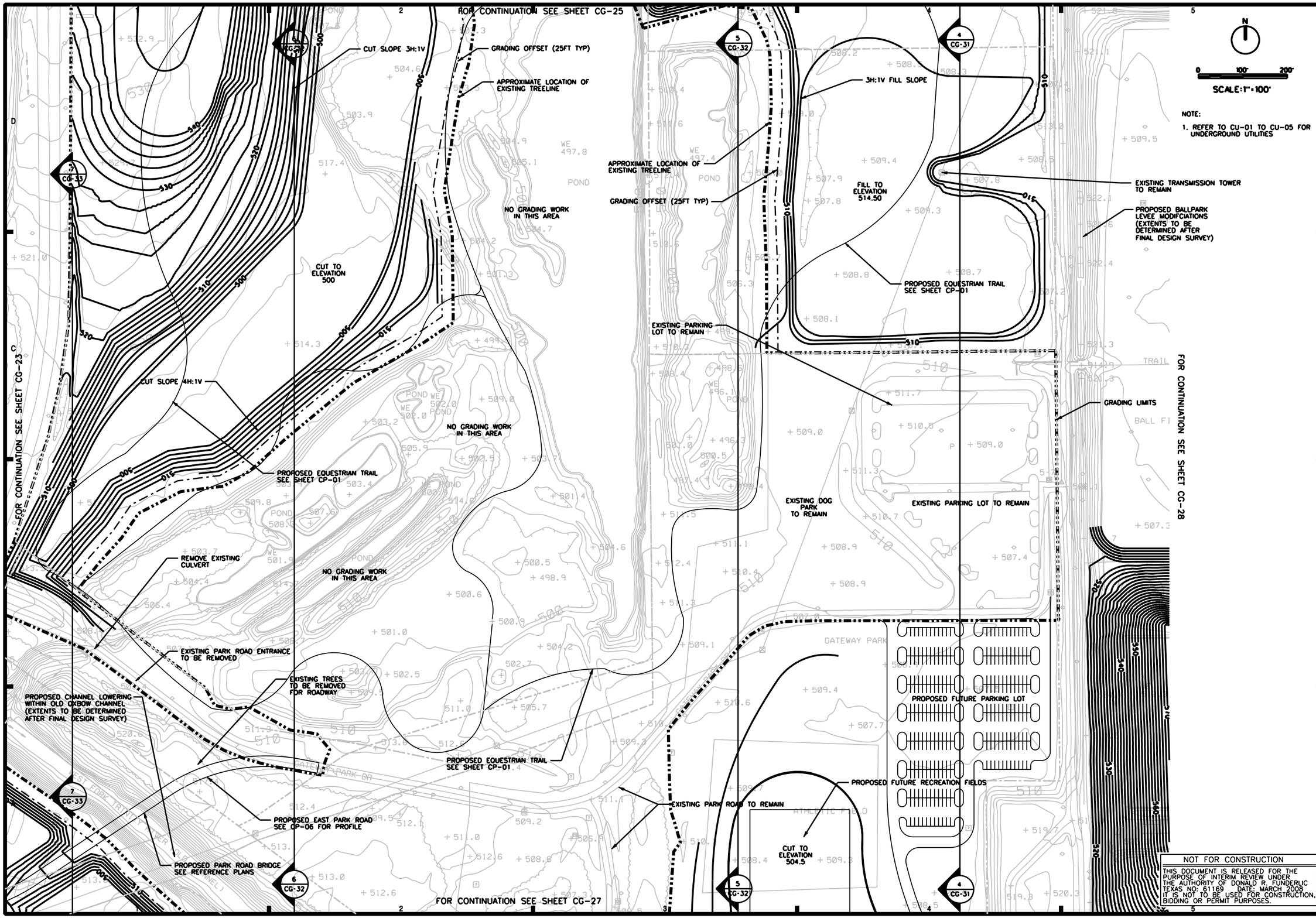

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US Army Corps of Engineers
Fort Worth District

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Design File: Datagrid.a
Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: M. OLESON
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
License State: PESTATE

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION
CG-26

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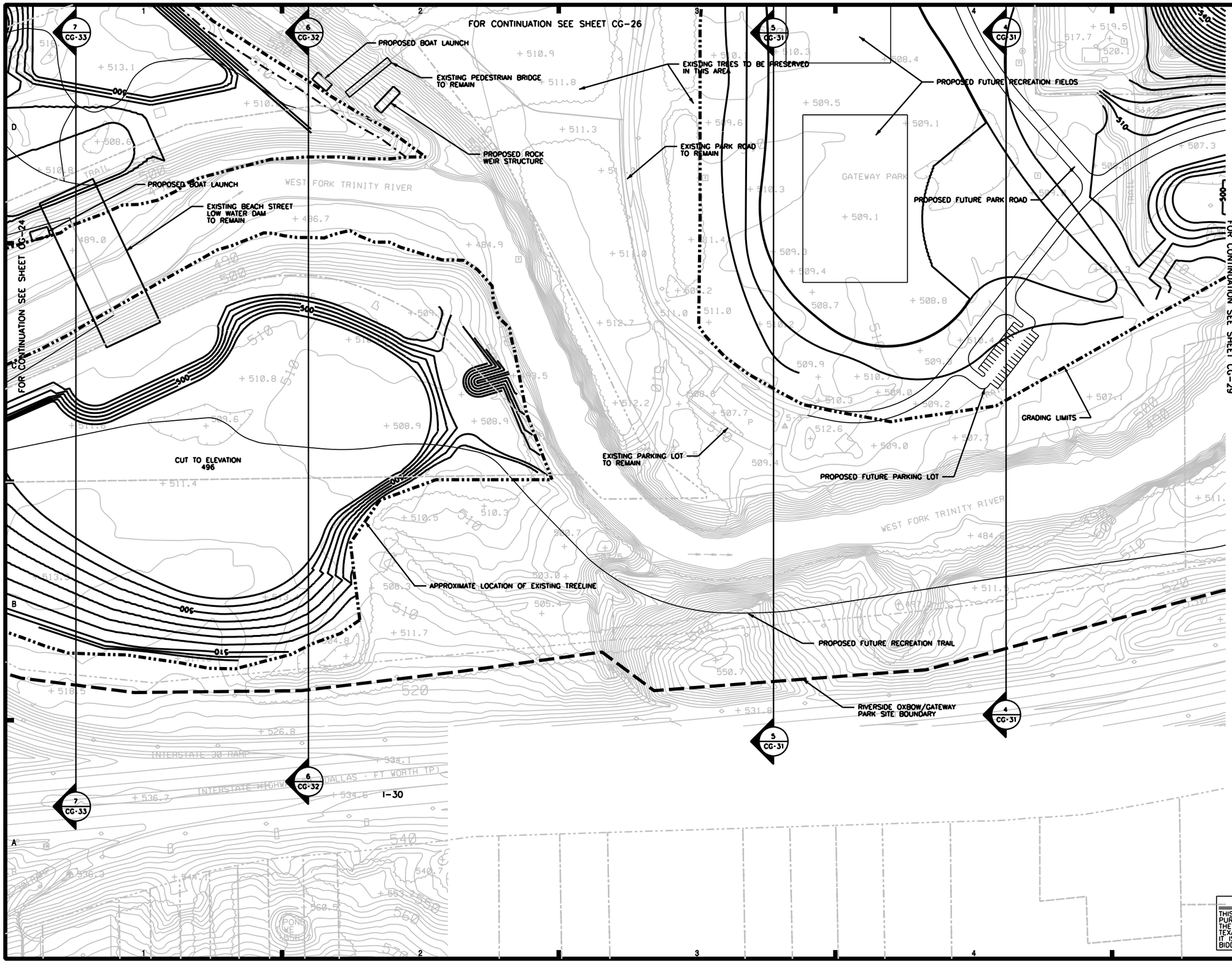

N

0 100' 200'

SCALE: 1" = 100'

NOTE:

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US Army Corps of Engineers
Fort Worth District

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License Number: PELicenseNum
LicenseState: PEState

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MTIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-27

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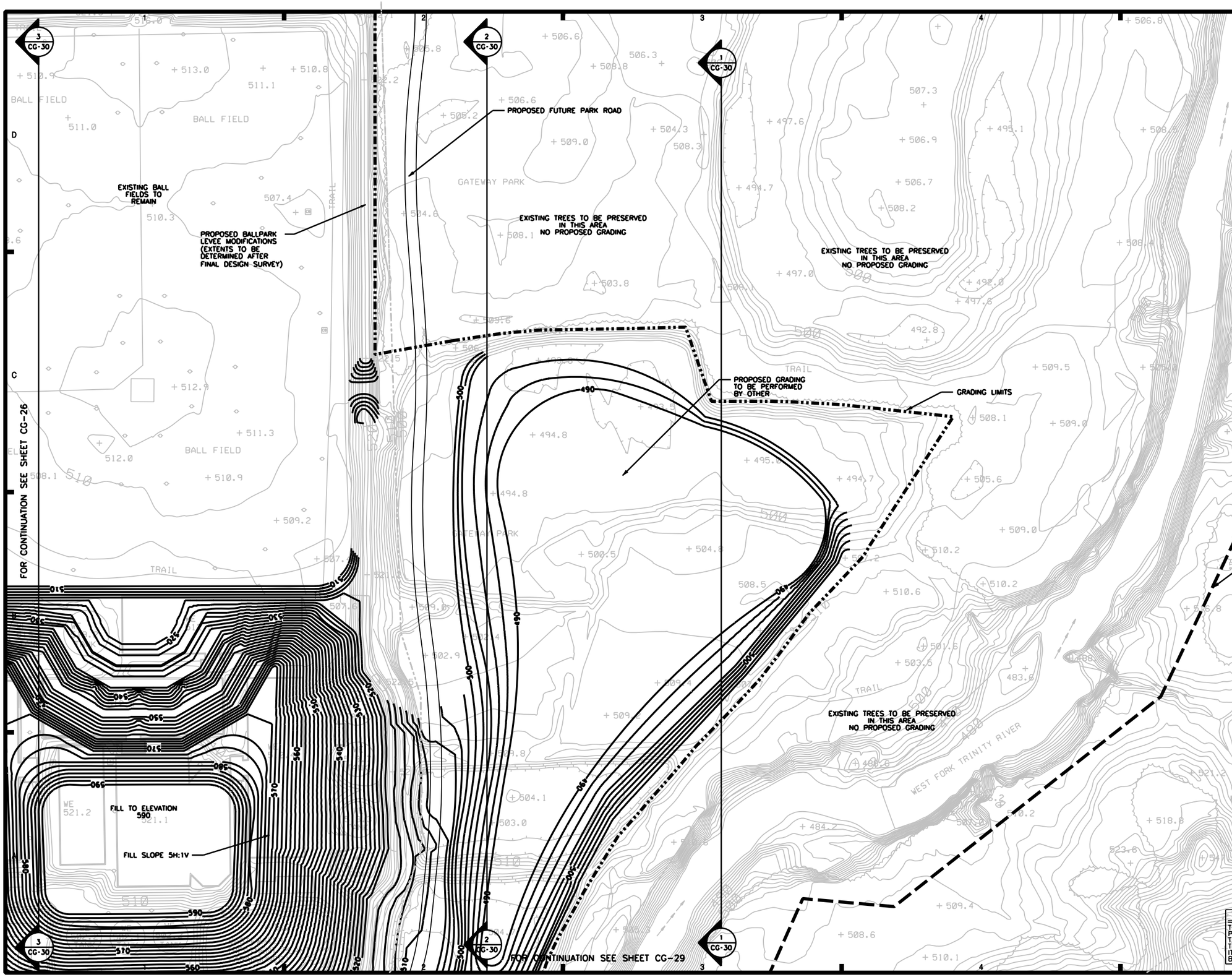

N

0 100' 200'

SCALE: 1" = 100'

NOTE:

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US Army Corps of Engineers Fort Worth District

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Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESTate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-28

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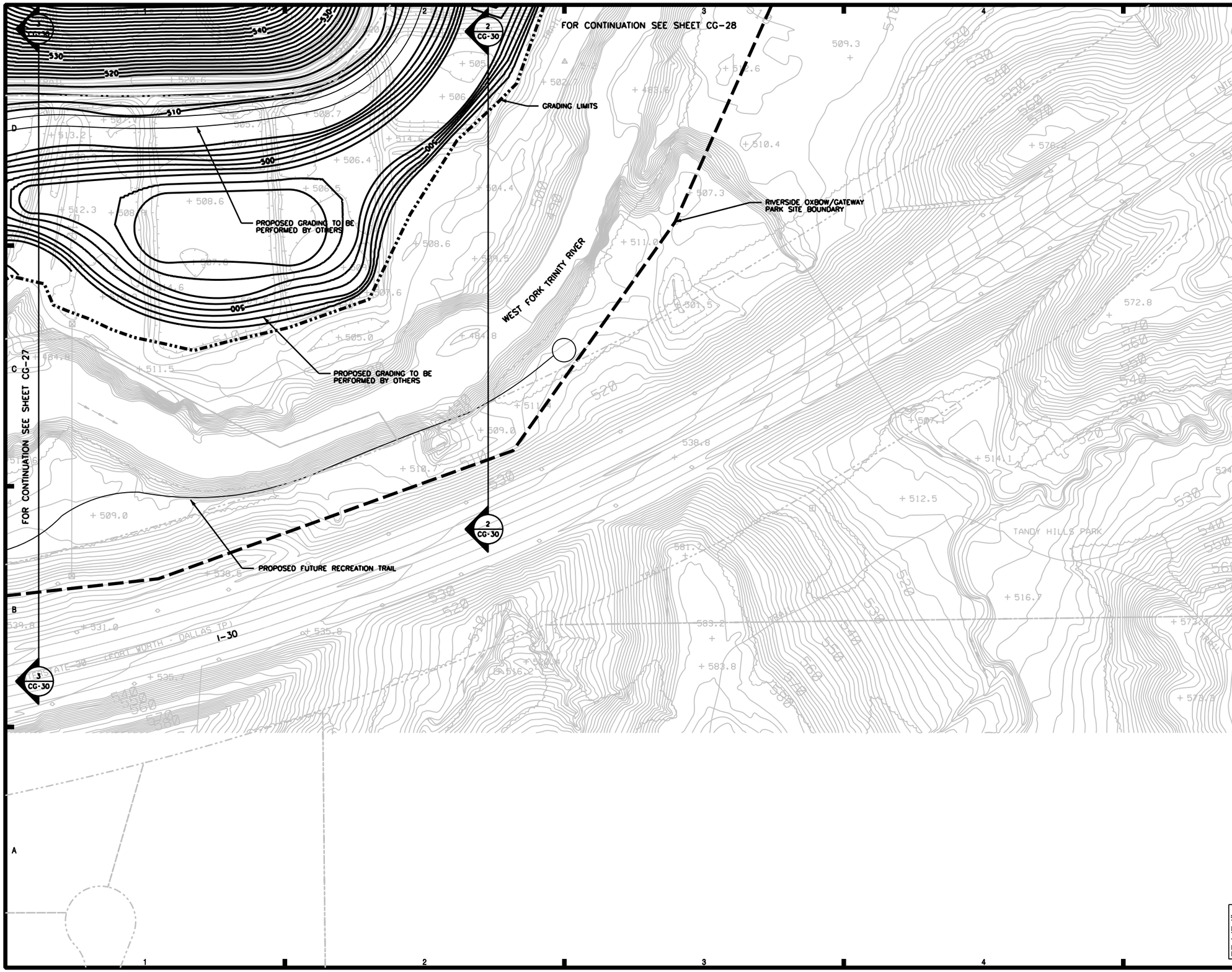

NOTE:

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Fort Worth District

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Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PEState

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
GRADING PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION
CG-29

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SCALE:
HORIZ: 1" = 100'
VERT: 1" = 20'

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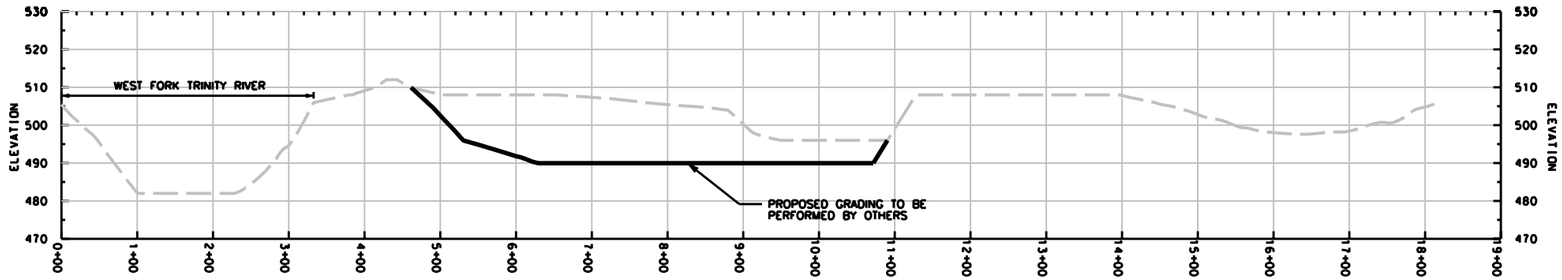

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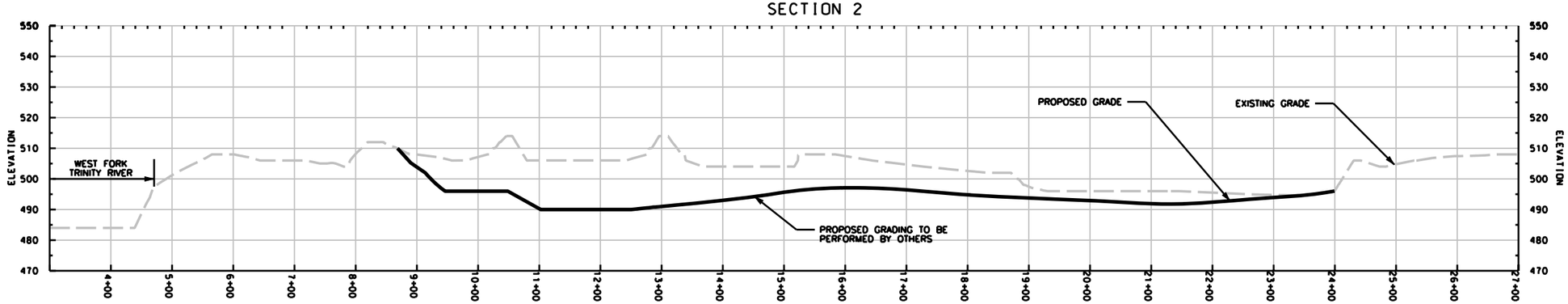

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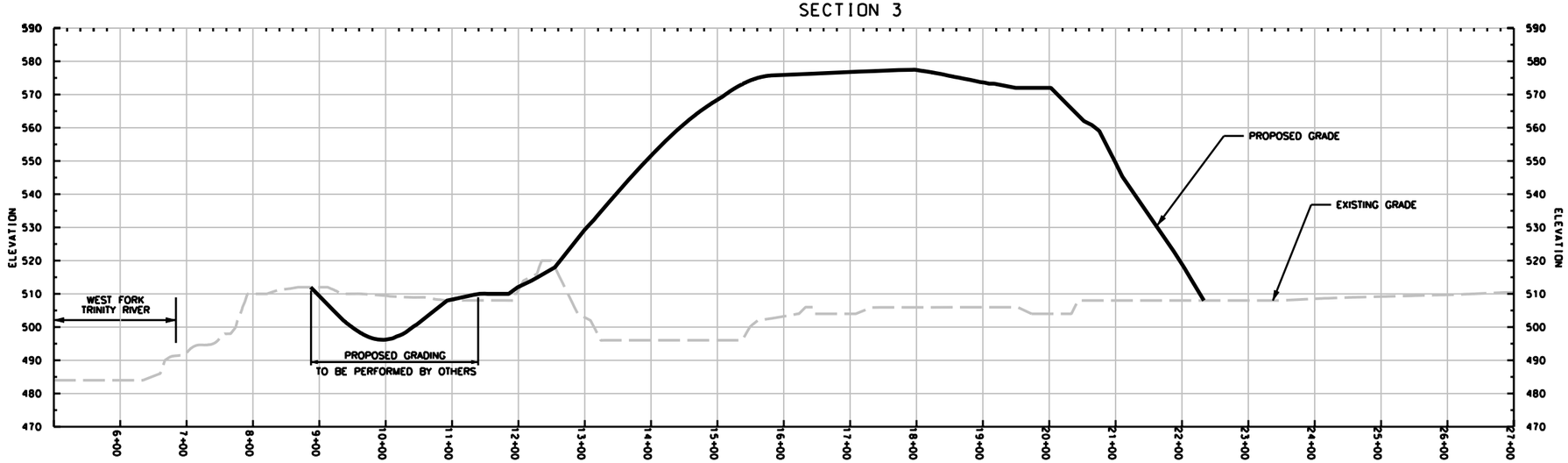

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US Army Corps of Engineers
Fort Worth District

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS-SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-30

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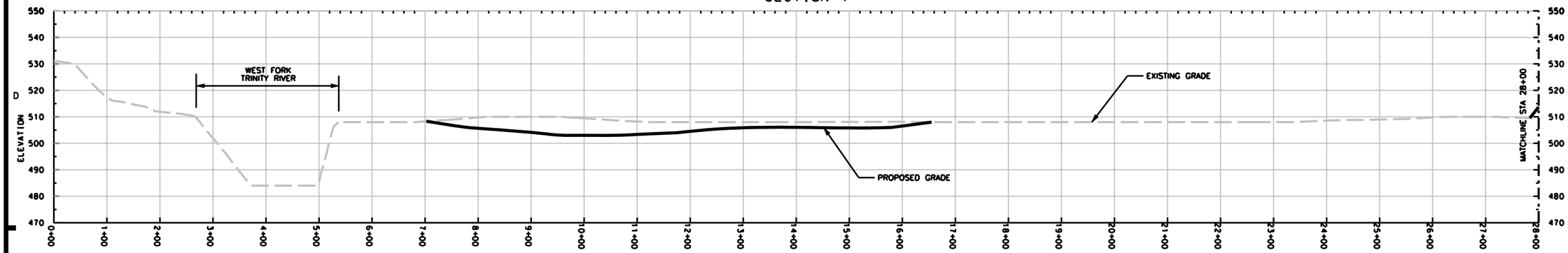
SCALE:
HORIZ: 1" = 100'
VERT: 1" = 20'

SECTION 4



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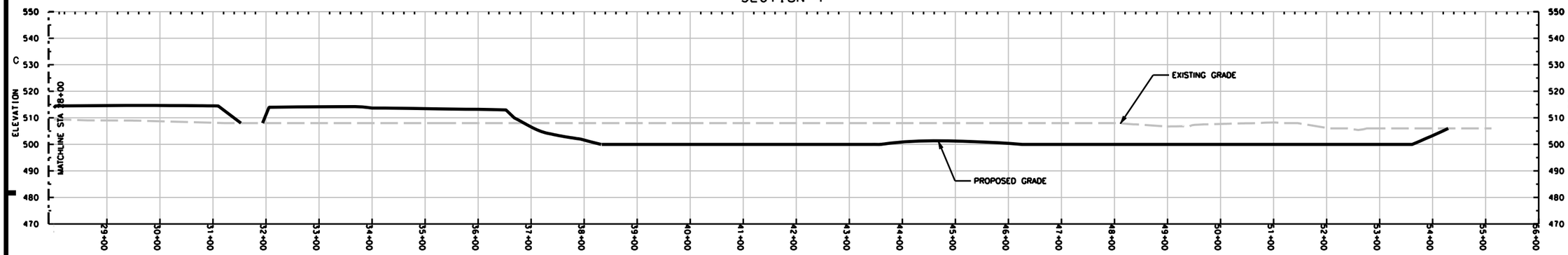

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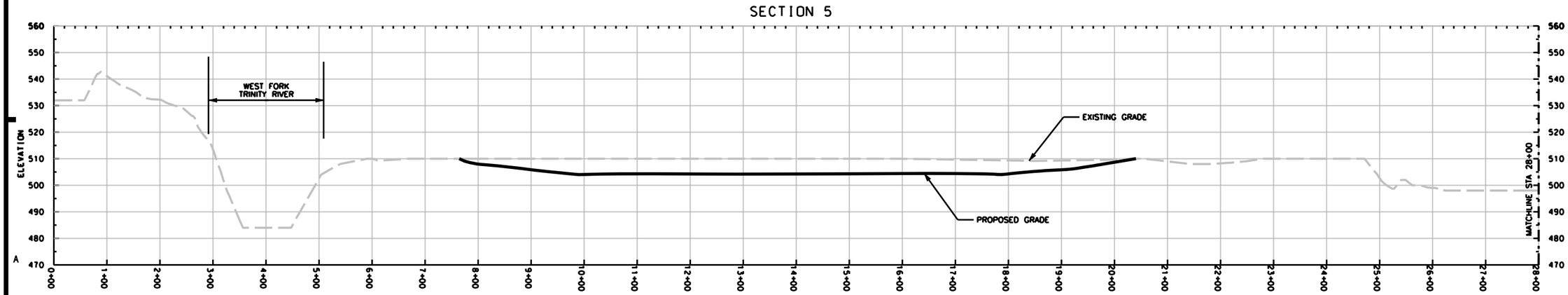

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US Army Corps of Engineers
Fort Worth District

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LicenseState: PEState

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-31

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SCALE:
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VERT: 1" = 20'

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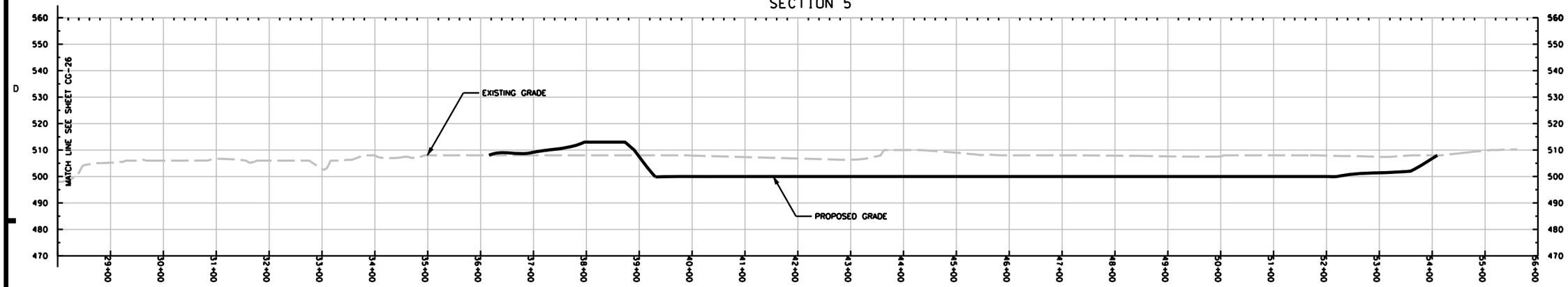

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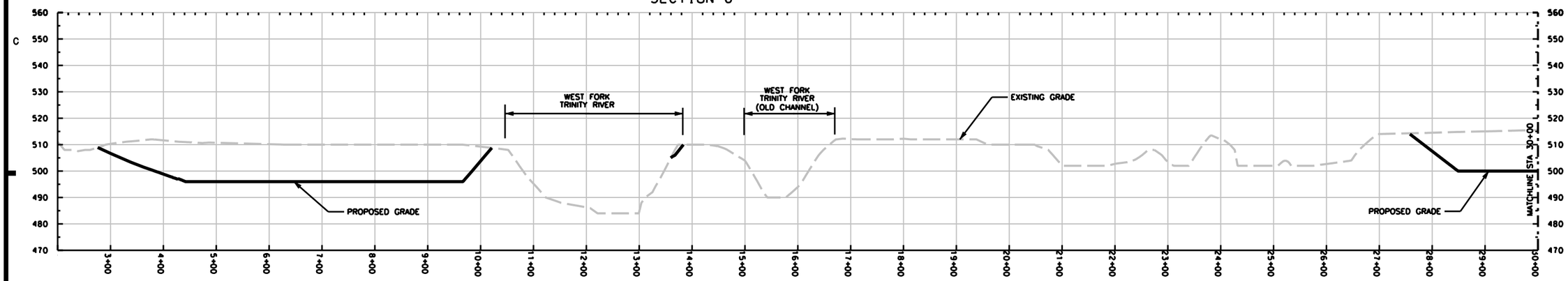

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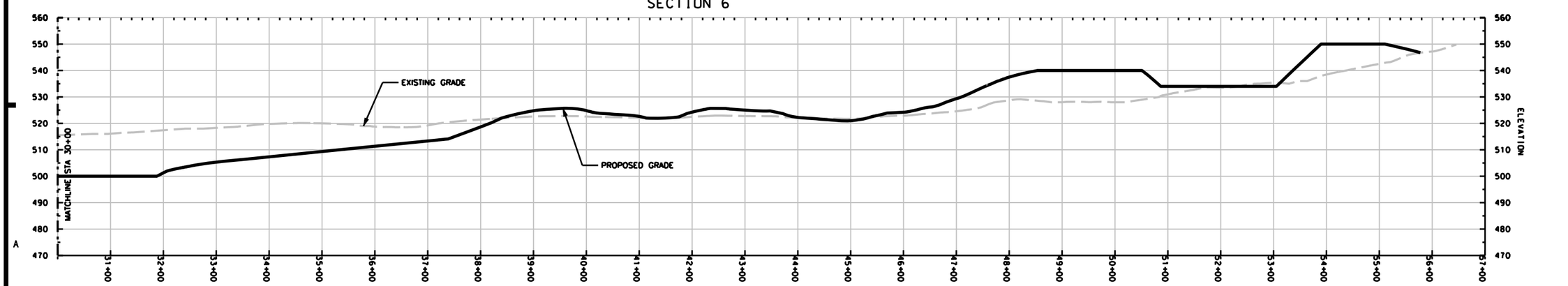

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US Army Corps of Engineers
Fort Worth District

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-32

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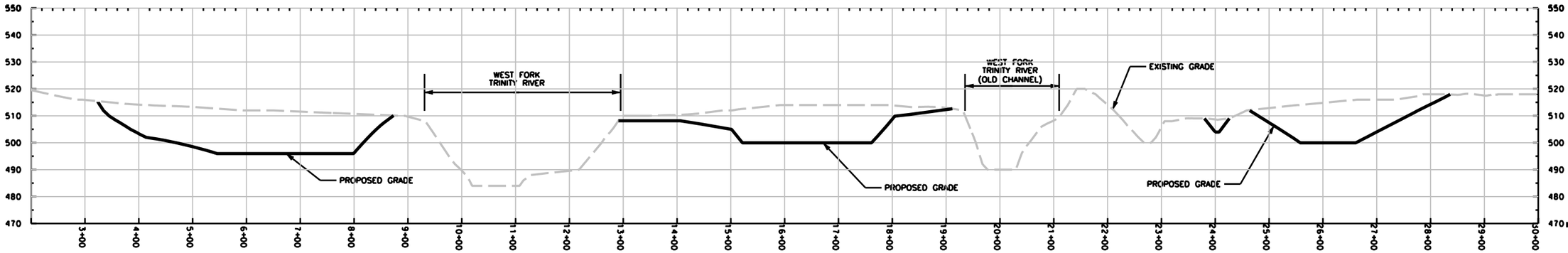
SCALE:
HORIZ: 1" = 100'
VERT: 1" = 20'

SECTION 7



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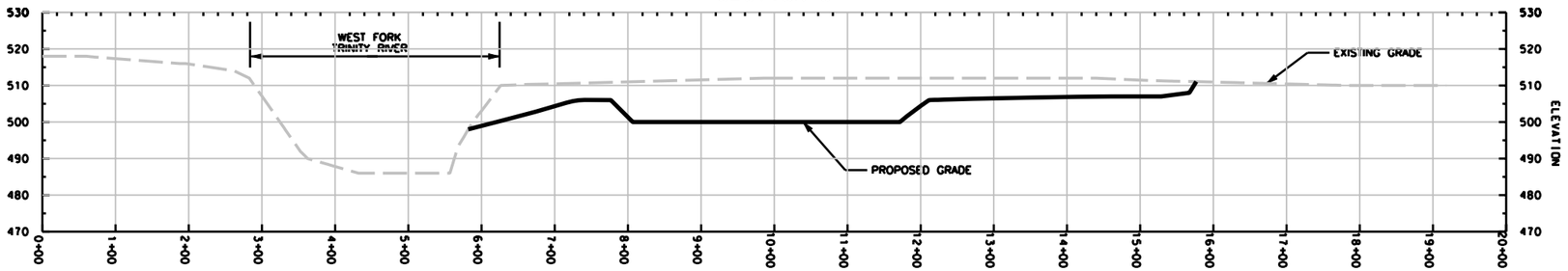

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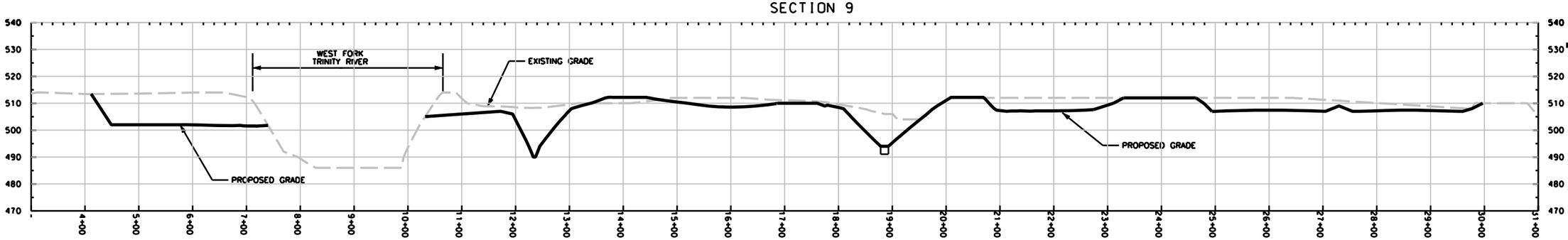

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US Army Corps of Engineers
Fort Worth District

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Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION
CG-33

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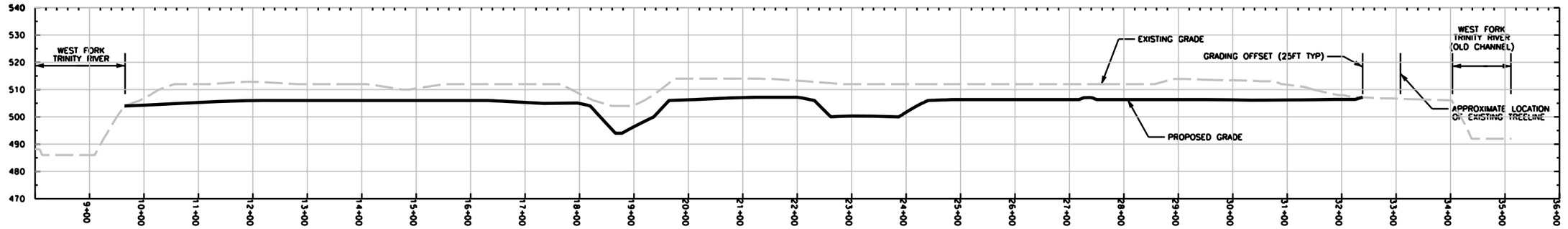
SCALE:
HORIZ: 1" = 100'
VERT: 1" = 20'

SECTION 10



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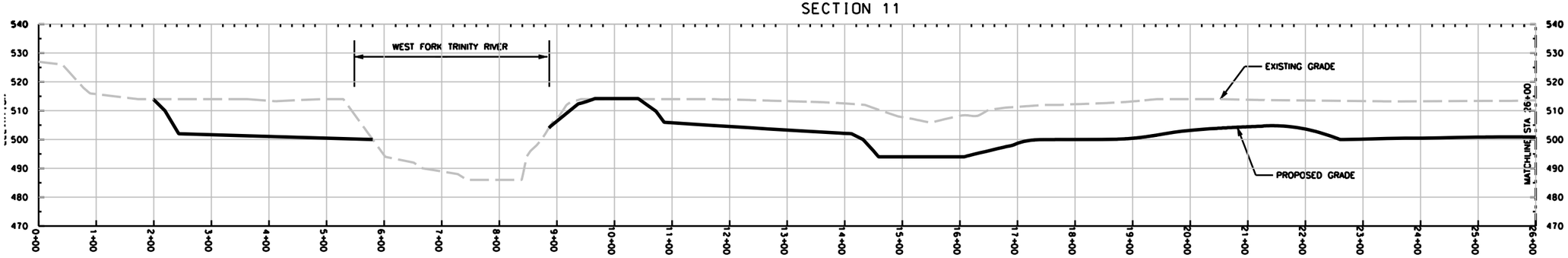

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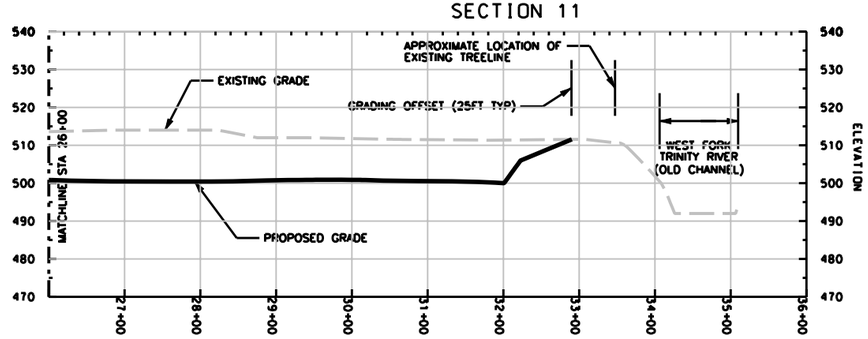

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Fort Worth District

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Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-34

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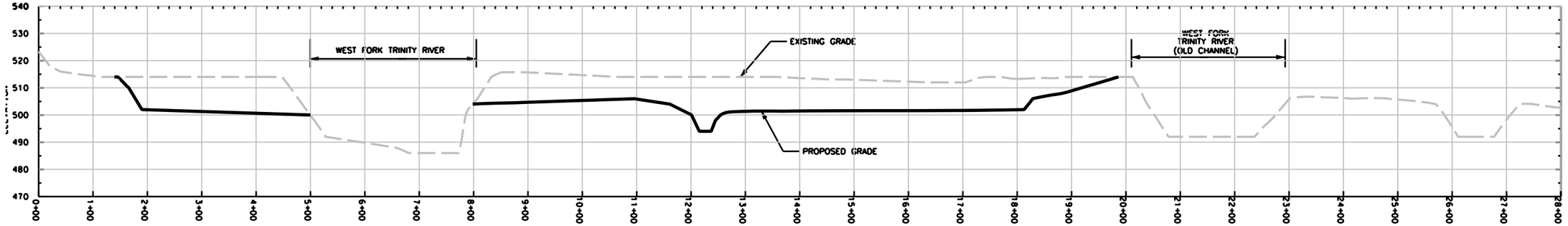
SCALE:
HORIZ: 1" = 100'
VERT: 1" = 20'

SECTION 12



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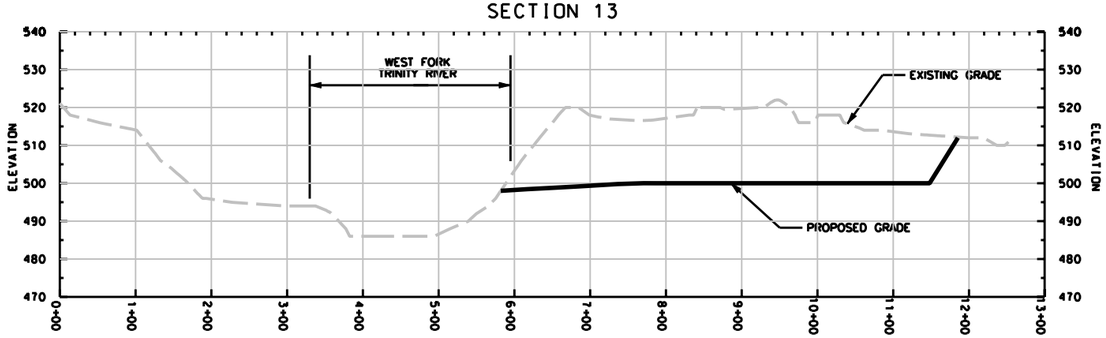

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Fort Worth District

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
CROSS SECTIONS
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CG-35

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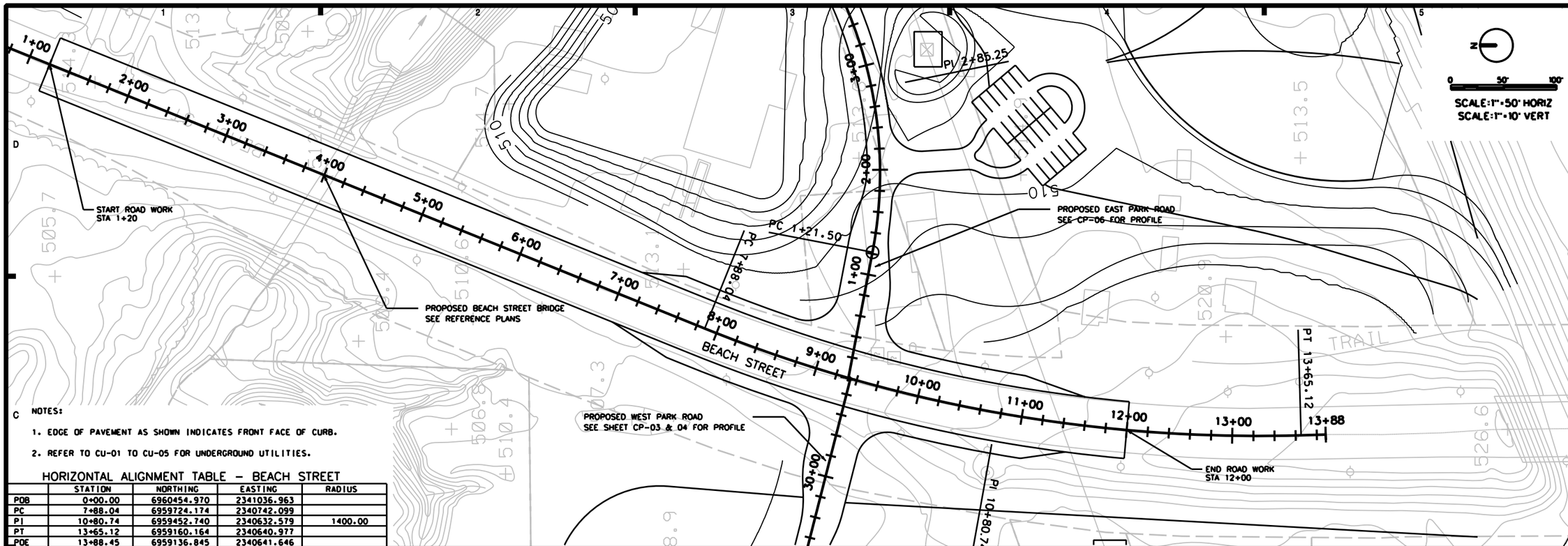


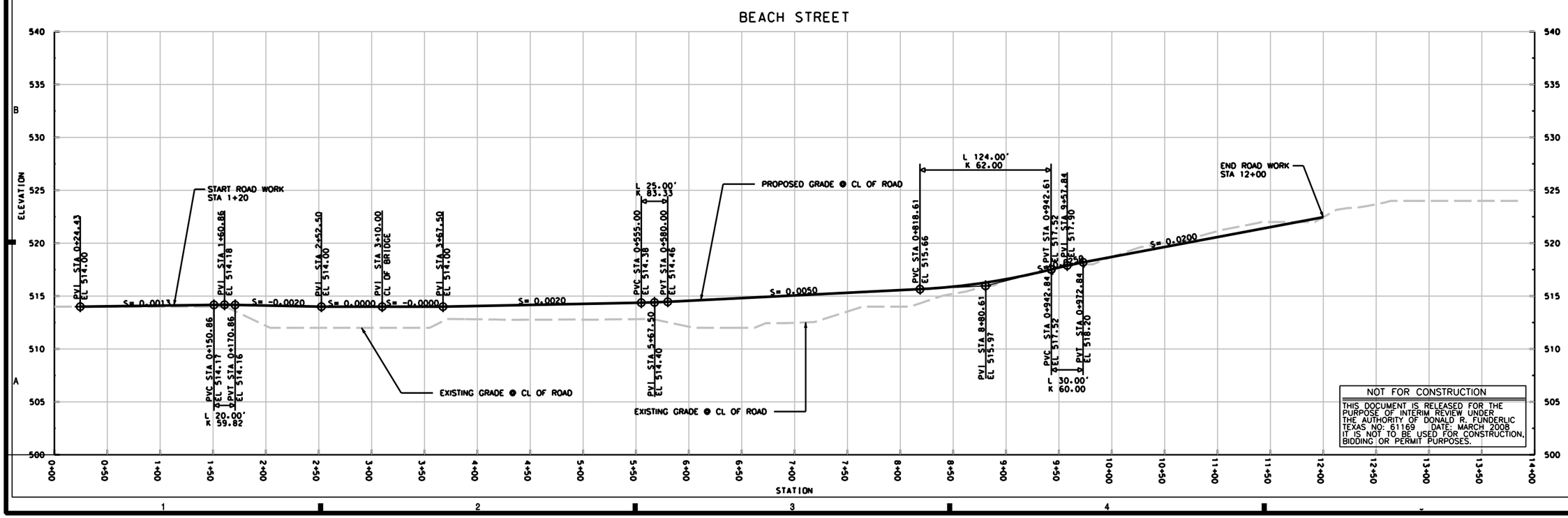
NOTES:

1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.
2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE – BEACH STREET

	STATION	NORTHING	EASTING	RADIUS
POB	0+00.00	6960454.970	2341036.963	
PC	7+88.04	6959724.174	2340742.099	
PI	10+80.74	6959452.740	2340632.579	1400.00
PT	13+65.12	6959160.164	2340640.977	
POE	13+88.45	6959136.845	2340641.646	

ALL COORDINATES ARE IN TEXAS STATE PLANE, ZONE 2, GRID, FEET



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Fort Worth District

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FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PLAN AND PROFILE
WEST PARKWAY

SHEET IDENTIFICATION
CP-01

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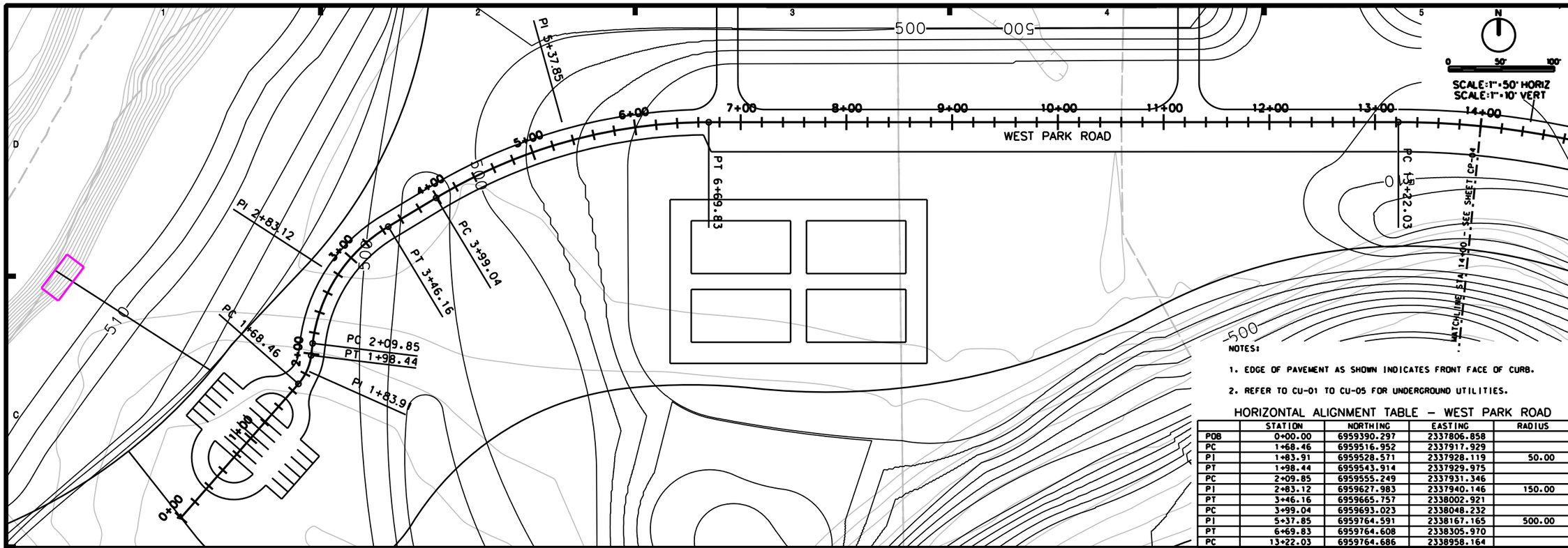


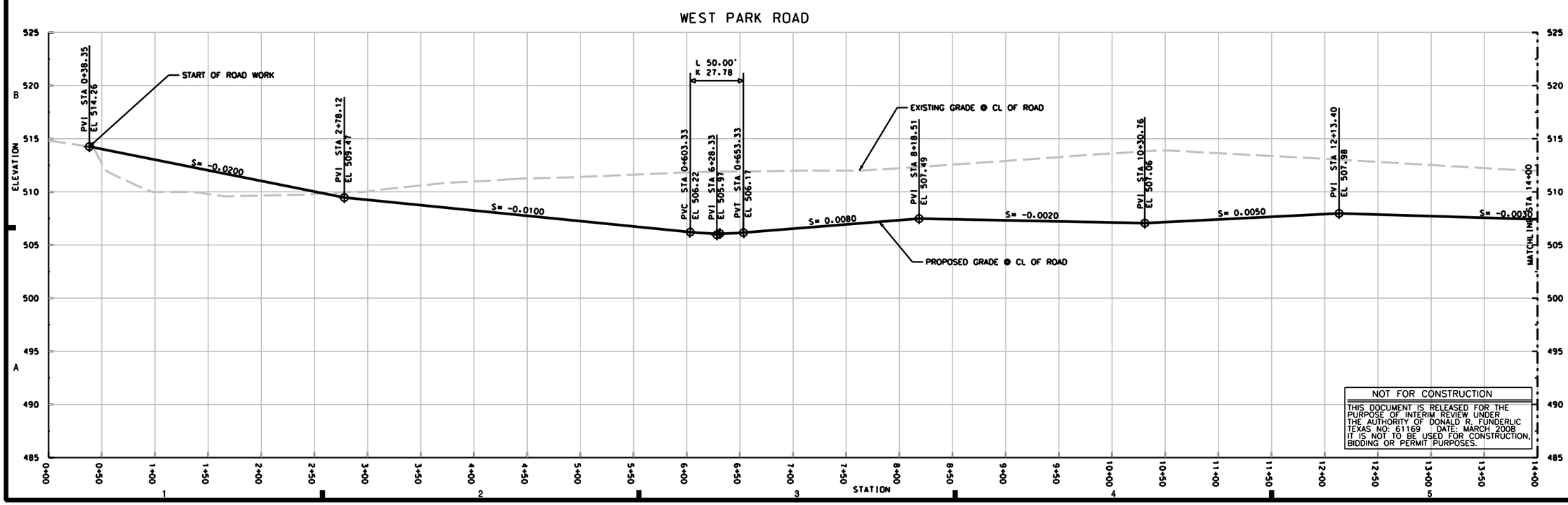
NOTES:

1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.
2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE – WEST PARK ROAD

	STATION	NORTHING	EASTING	RADIUS
POB	0+00.00	6959390.297	2337806.858	
PC	1+68.46	6959516.952	2337917.929	
PI	1+83.91	6959528.571	2337928.119	50.00
PT	1+98.44	6959543.914	2337929.975	
PC	2+09.85	6959555.249	2337931.346	
PI	2+83.12	6959627.983	2337940.146	150.00
PT	3+46.16	6959665.757	2338002.921	
PC	3+99.04	6959693.023	2338048.232	
PI	5+37.85	6959764.591	2338167.165	500.00
PT	6+69.83	6959764.608	2338305.970	
PC	13+22.03	6959764.686	2338958.164	

ALL COORDINATES ARE TEXAS STATE PLANE, ZONE 2, GRID, FEET



NOT FOR CONSTRUCTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF DONALD R. FUNDERLIC TEXAS NO: 61169 DATE: MARCH 2008 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

US Army Corps of Engineers
Fort Worth District

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PLAN AND PROFILE
WEST PARK ROAD

SHEET IDENTIFICATION
CP-02

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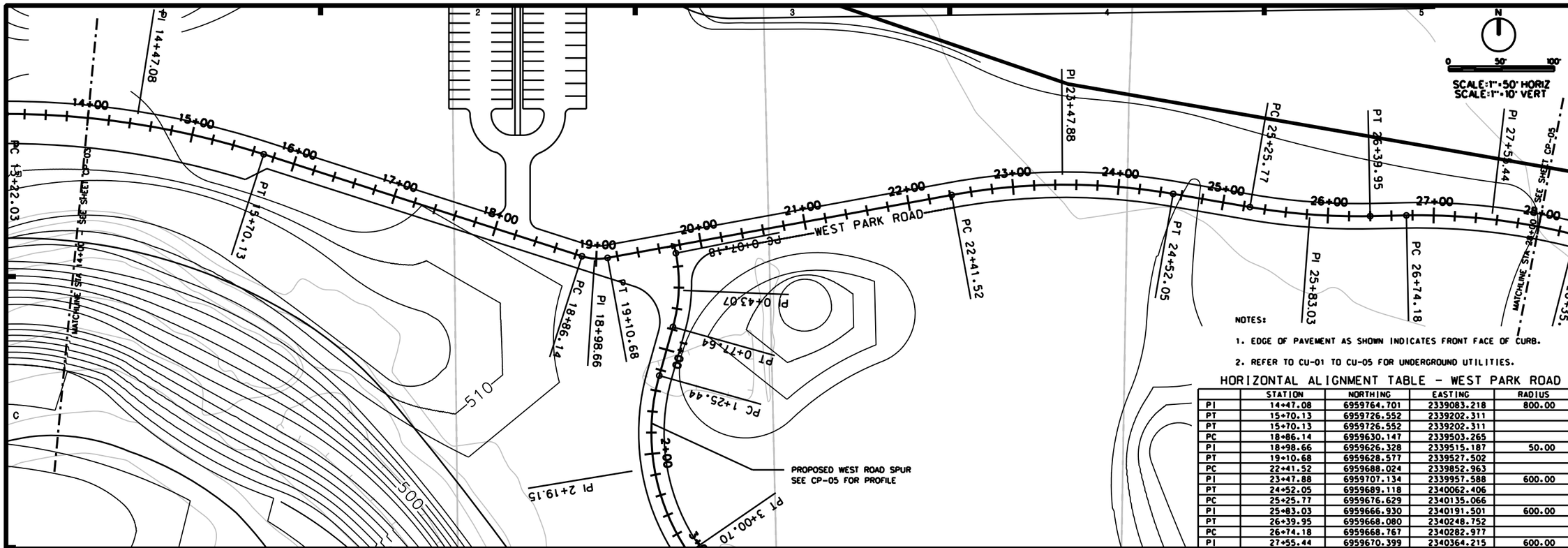


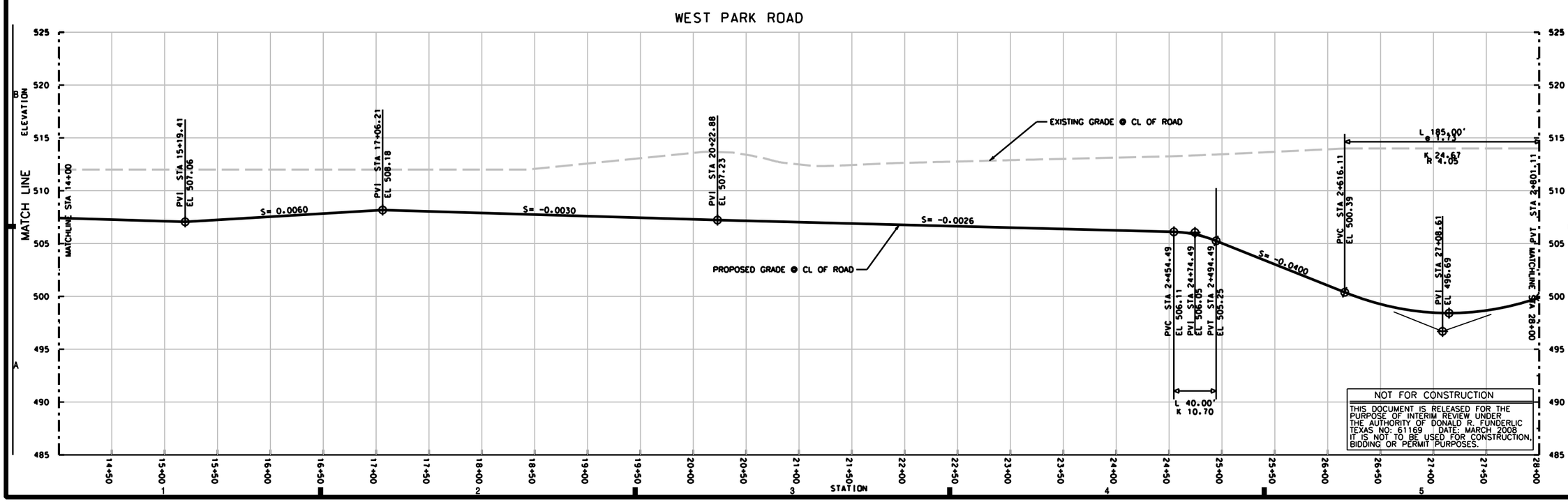
NOTES:

1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.
2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE - WEST PARK ROAD

	STATION	NORTHING	EASTING	RADIUS
PI	14+47.08	6959764.701	2339083.218	800.00
PT	15+70.13	6959726.552	2339202.311	
PT	15+70.13	6959726.552	2339202.311	
PC	18+86.14	6959630.147	2339503.265	
PI	18+98.66	6959626.328	2339515.187	50.00
PT	19+10.68	6959628.577	2339527.502	
PC	22+41.52	6959688.024	2339852.963	
PI	23+47.88	6959707.134	2339957.588	600.00
PT	24+52.05	6959689.118	2340062.406	
PC	25+25.77	6959676.629	2340135.066	
PI	25+83.03	6959666.930	2340191.501	600.00
PT	26+39.95	6959668.080	2340248.752	
PC	26+74.18	6959668.767	2340282.977	
PI	27+55.44	6959670.399	2340364.215	600.00

ALL COORDINATES ARE TEXAS STATE PLANE, ZONE 2, GRID, FEET



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US Army Corps of Engineers
Fort Worth District

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PLAN AND PROFILE
WEST PARK ROAD

SHEET IDENTIFICATION

CP-03

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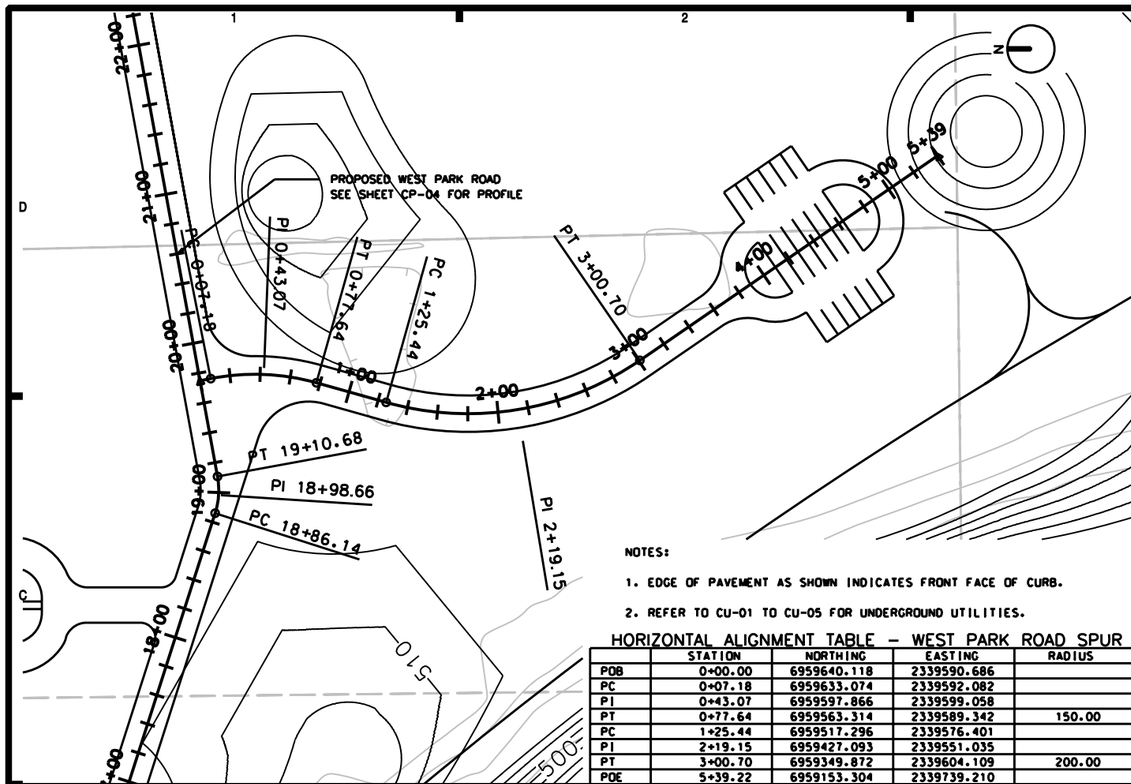


NOTES:

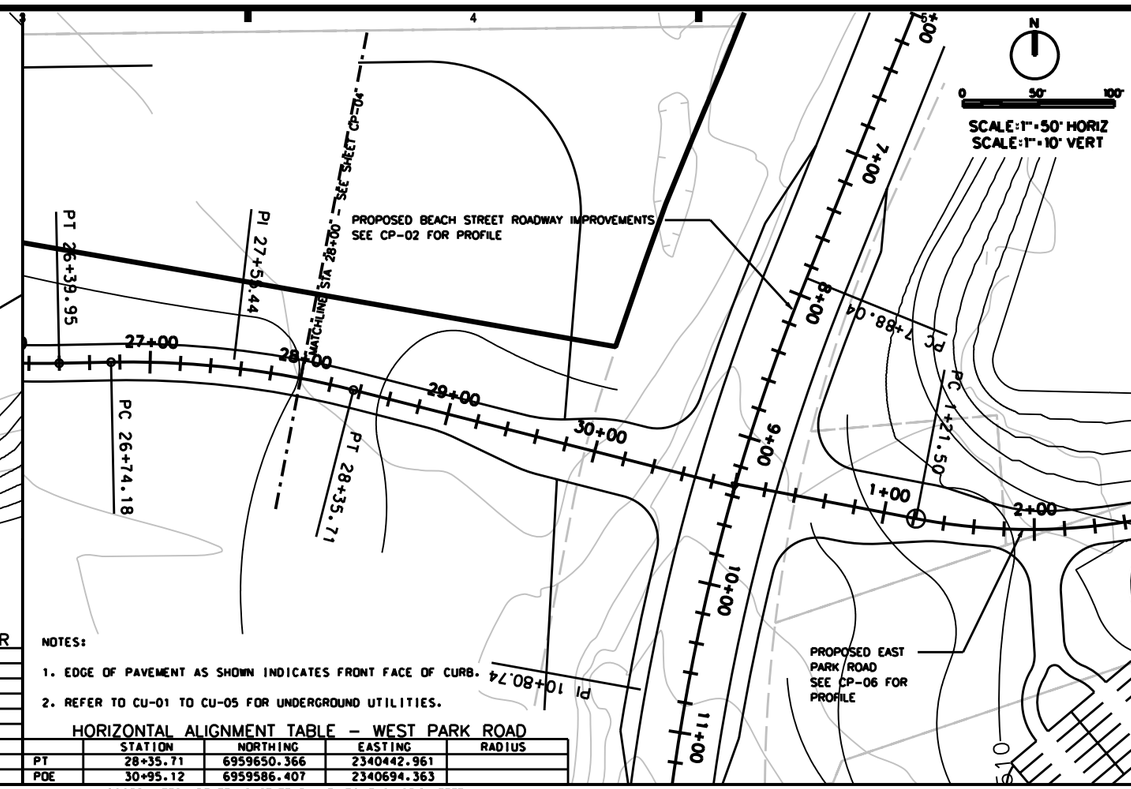
1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.

2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE – WEST PARK ROAD SPUR

	STATION	NORTHING	EASTING	RADIUS
POB	0+00.00	6959640.118	2339590.686	
PC	0+07.18	6959633.074	2339592.082	
PI	0+43.07	6959597.866	2339599.058	
PT	0+77.64	6959563.314	2339589.342	150.00
PC	1+25.44	6959517.296	2339576.401	
PI	2+19.15	6959427.093	2339551.035	
PT	3+00.70	6959349.872	2339604.109	200.00
POE	5+39.22	6959153.304	2339739.210	

ALL COORDINATES ARE TEXAS STATE PLANE, ZONE 2, GRID, FEET



NOTES:

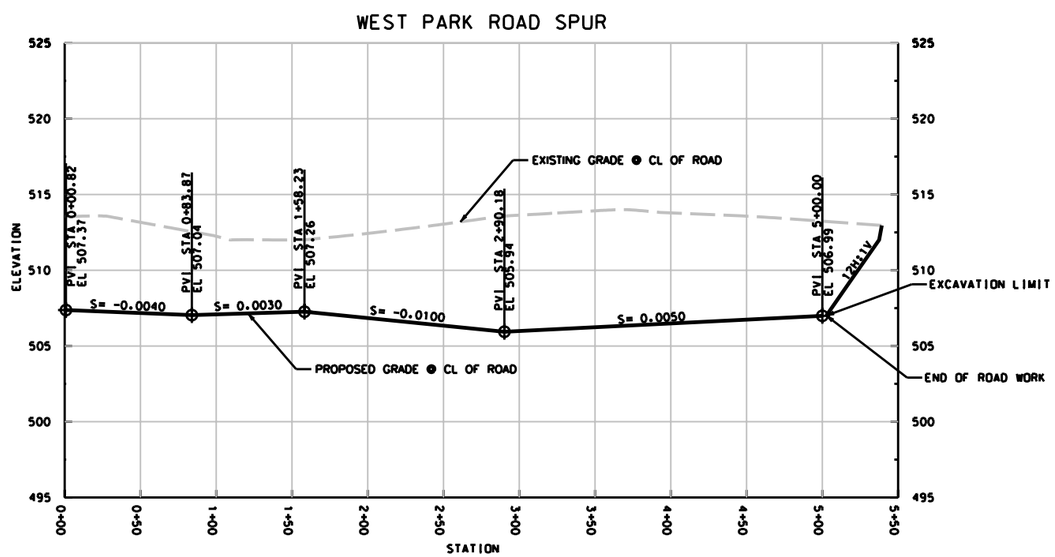
1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.

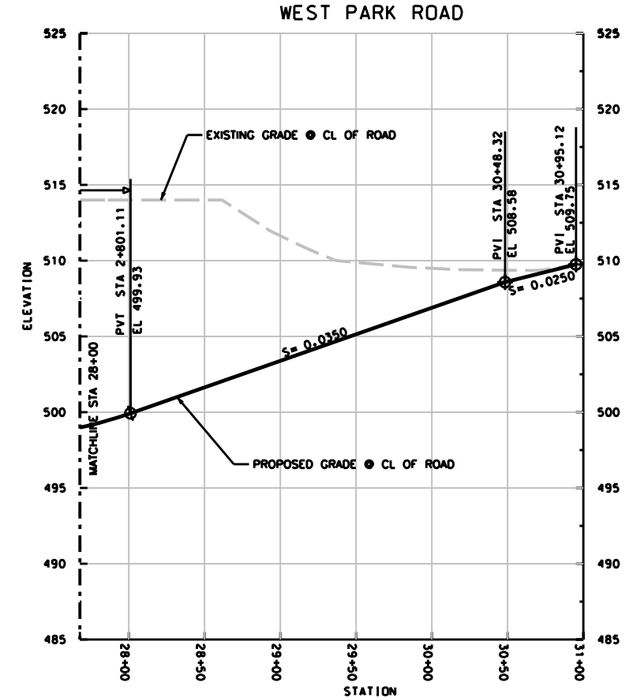
2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE – WEST PARK ROAD

	STATION	NORTHING	EASTING	RADIUS
PT	28+35.71	6959650.366	2340442.961	
POE	30+95.12	6959586.407	2340694.363	

ALL COORDINATES ARE TEXAS STATE PLANE, ZONE 2, GRID, FEET





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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	App.

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Designed by: R. WILSON
Drawn by: R. WILSON
Checked by: D. FUNDERLIC
Responsible P.E.: P.E.Responsible
License Number: P.E.LicenseNum
License State: P.E.State

CDM

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PLAN AND PROFILE
WEST PARK ROAD SPUR

SHEET IDENTIFICATION

CP-04

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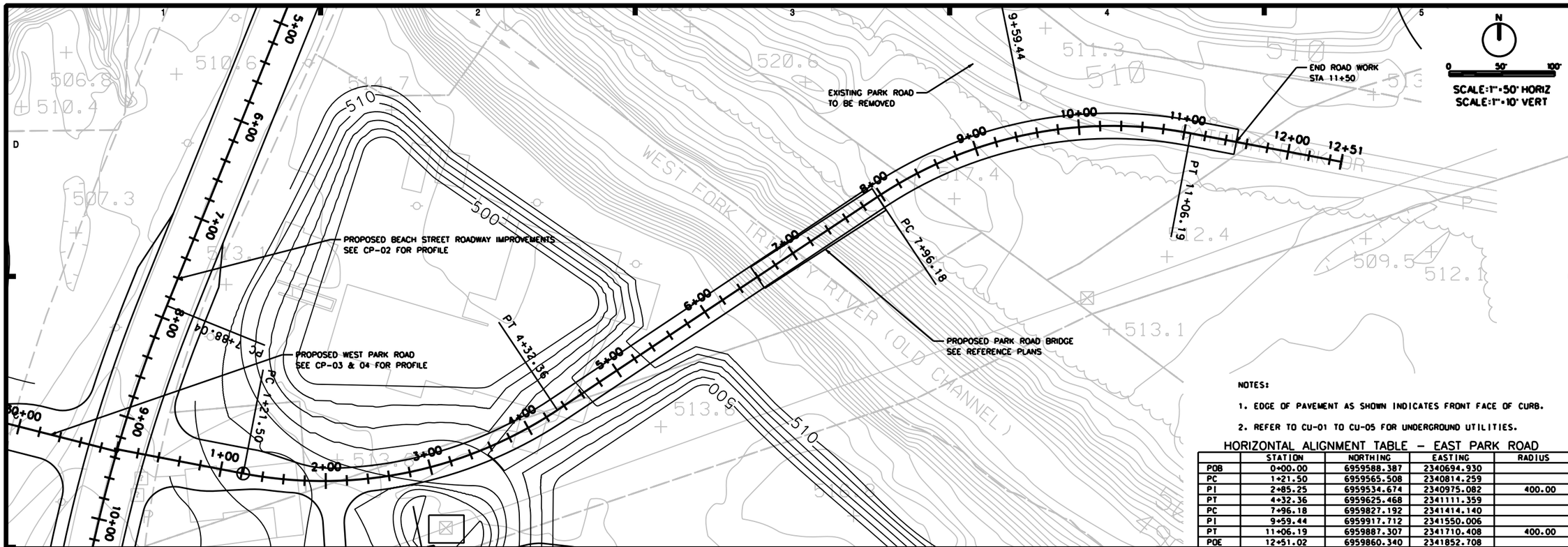


NOTES:

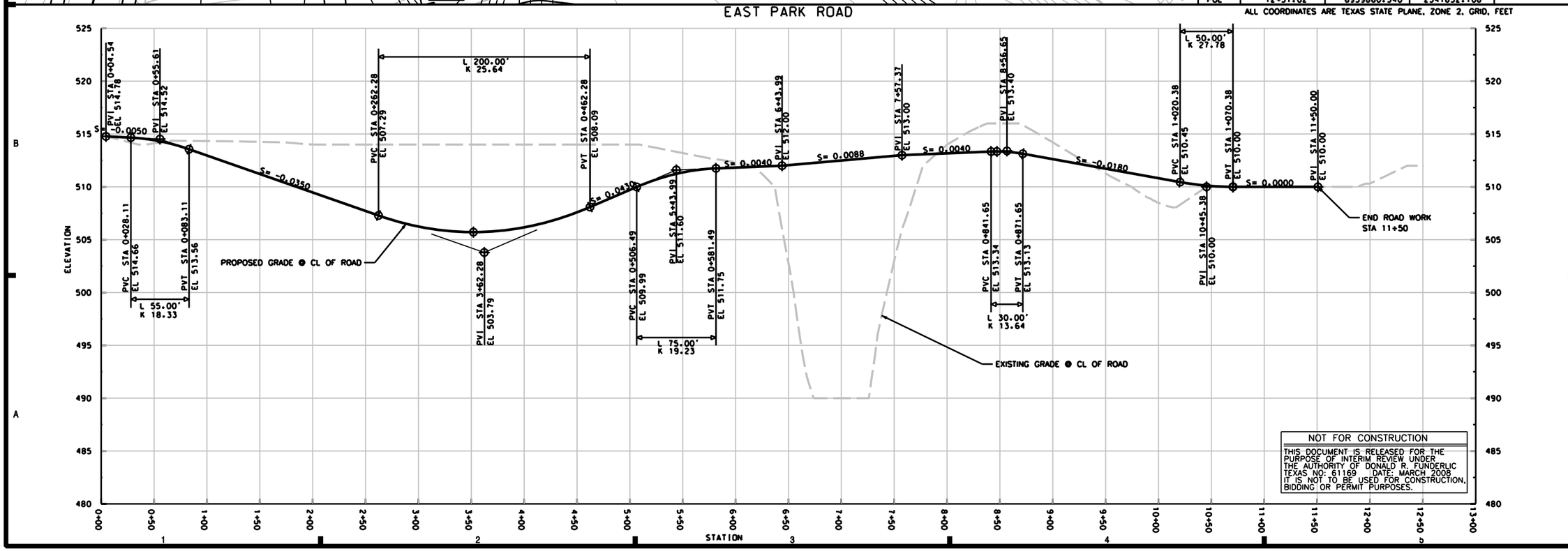
1. EDGE OF PAVEMENT AS SHOWN INDICATES FRONT FACE OF CURB.
2. REFER TO CU-01 TO CU-05 FOR UNDERGROUND UTILITIES.

HORIZONTAL ALIGNMENT TABLE – EAST PARK ROAD

	STATION	NORTHING	EASTING	RADIUS
POB	0+00.00	6959588.387	2340694.930	
PC	1+21.50	6959565.508	2340814.259	
PI	2+85.25	6959534.674	2340975.082	400.00
PT	4+32.36	6959625.468	2341111.359	
PC	7+96.18	6959827.192	2341414.140	
PI	9+59.44	6959917.712	2341550.006	
PT	11+06.19	6959887.307	2341710.408	400.00
POE	12+51.02	6959860.340	2341852.708	

ALL COORDINATES ARE TEXAS STATE PLANE, ZONE 2, GRID, FEET

EAST PARK ROAD



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US Army Corps of Engineers
Fort Worth District

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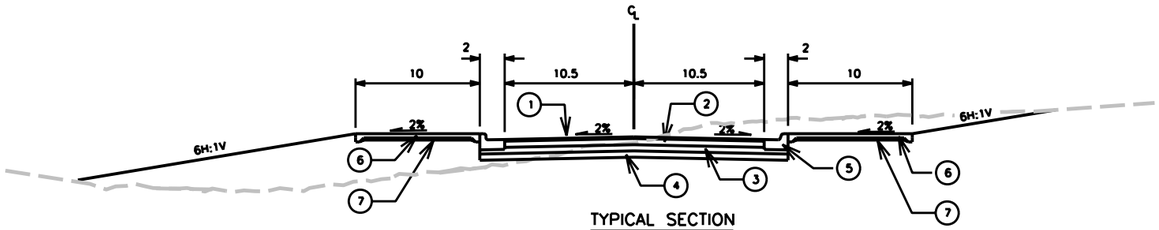
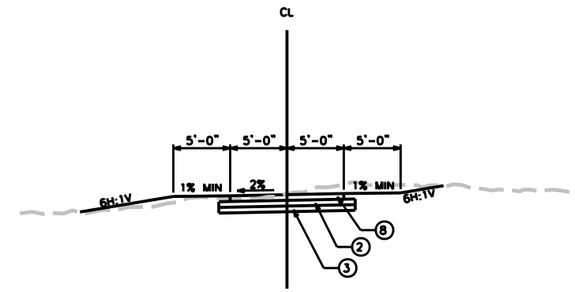
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
PLAN AND PROFILE
EAST PARK ROAD

SHEET IDENTIFICATION
CP-05

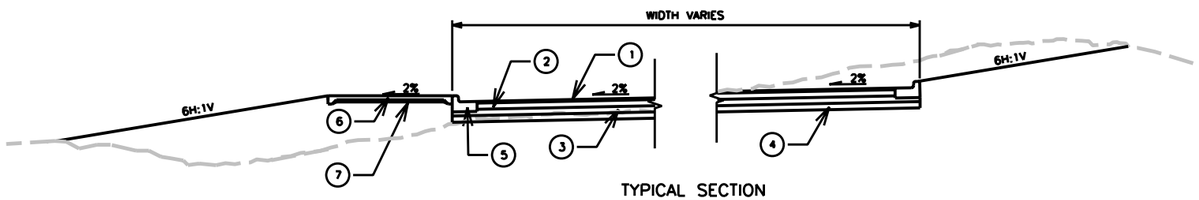


TYPICAL SECTION
PARK ROADS

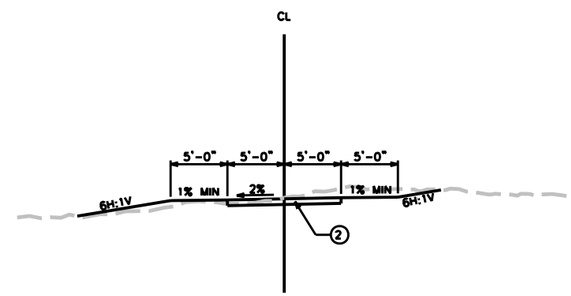
1. 1.5" HMAC SURFACE COURSE AND 2.5" HMAC BINDER COURSE
2. 6" AGGREGATE BASE COURSE AT 95%
3. 6" COMPACTED SUBBASE AT 90%
4. 6" RAW COMPACTED SUBGRADE
5. 2' CONCRETE CURB WITH 3-#4 BARS REINF. STL.
6. 4" THICK CONC. TRAIL WITH #3 STL. REINF. @ 24" CENTERS EACH WAY
7. 2" WASHED SAND
8. 6" PORTLAND CEMENT CONCRETE W/ #4 BARS SPACED AT 16" OC
9. 9" MULCH
10. 9" REINFORCED CONCRETE PAVEMENT
11. STABILIZED SUBGRADE



TYPICAL SECTION
MAINTENANCE/ RECREATION TRAIL
NOT TO SCALE



TYPICAL SECTION
PARKING AREAS
NOT TO SCALE



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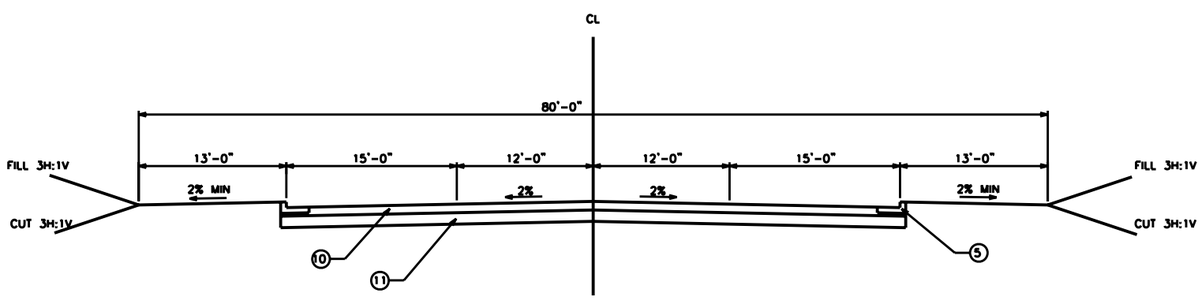
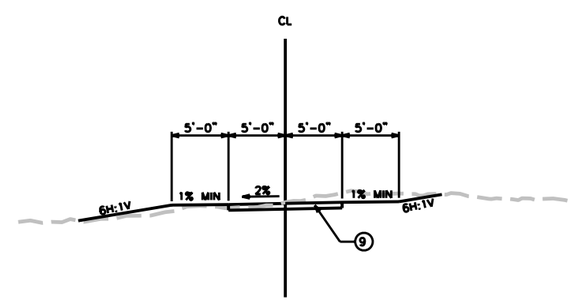
RECREATION ONLY TRAIL
NOT TO SCALE



TYPICAL SECTION
BEACH STREET
NOT TO SCALE



TYPICAL SECTION
EQUESTRIAN TRAIL
NOT TO SCALE

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

CDM

Design file: DesignFile
Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
TYPICAL PAVEMENT SECTION

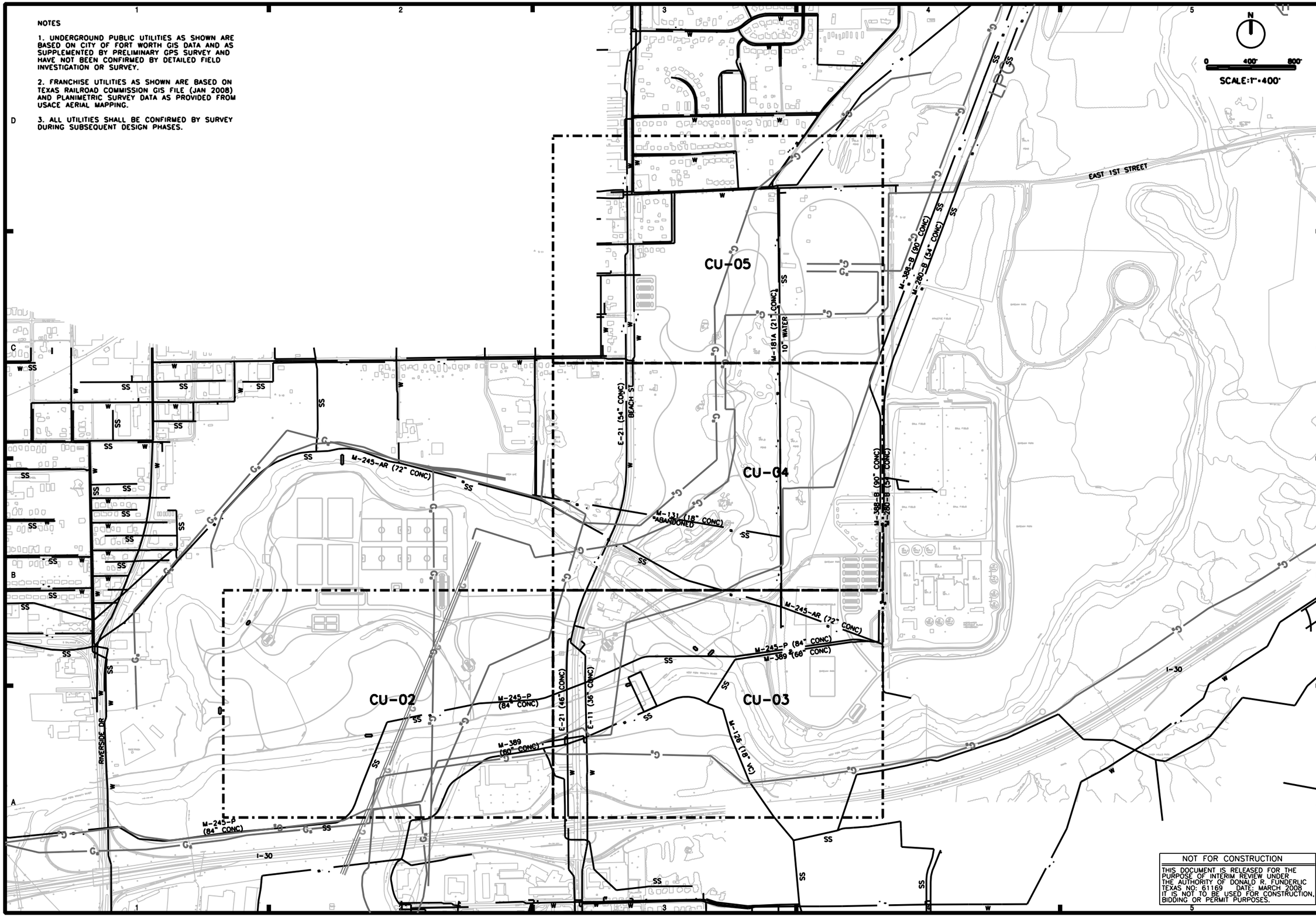
SHEET IDENTIFICATION
CP-06

NOTES

1. UNDERGROUND PUBLIC UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY.

2. FRANCHISE UTILITIES AS SHOWN ARE BASED ON TEXAS RAILROAD COMMISSION GIS FILE (JAN 2008) AND PLANIMETRIC SURVEY DATA AS PROVIDED FROM USACE AERIAL MAPPING.

3. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

CDM

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Designed by: RLESCH
Drawn by: RWEBER
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PEState

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
UTILITY KEY PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CU-01

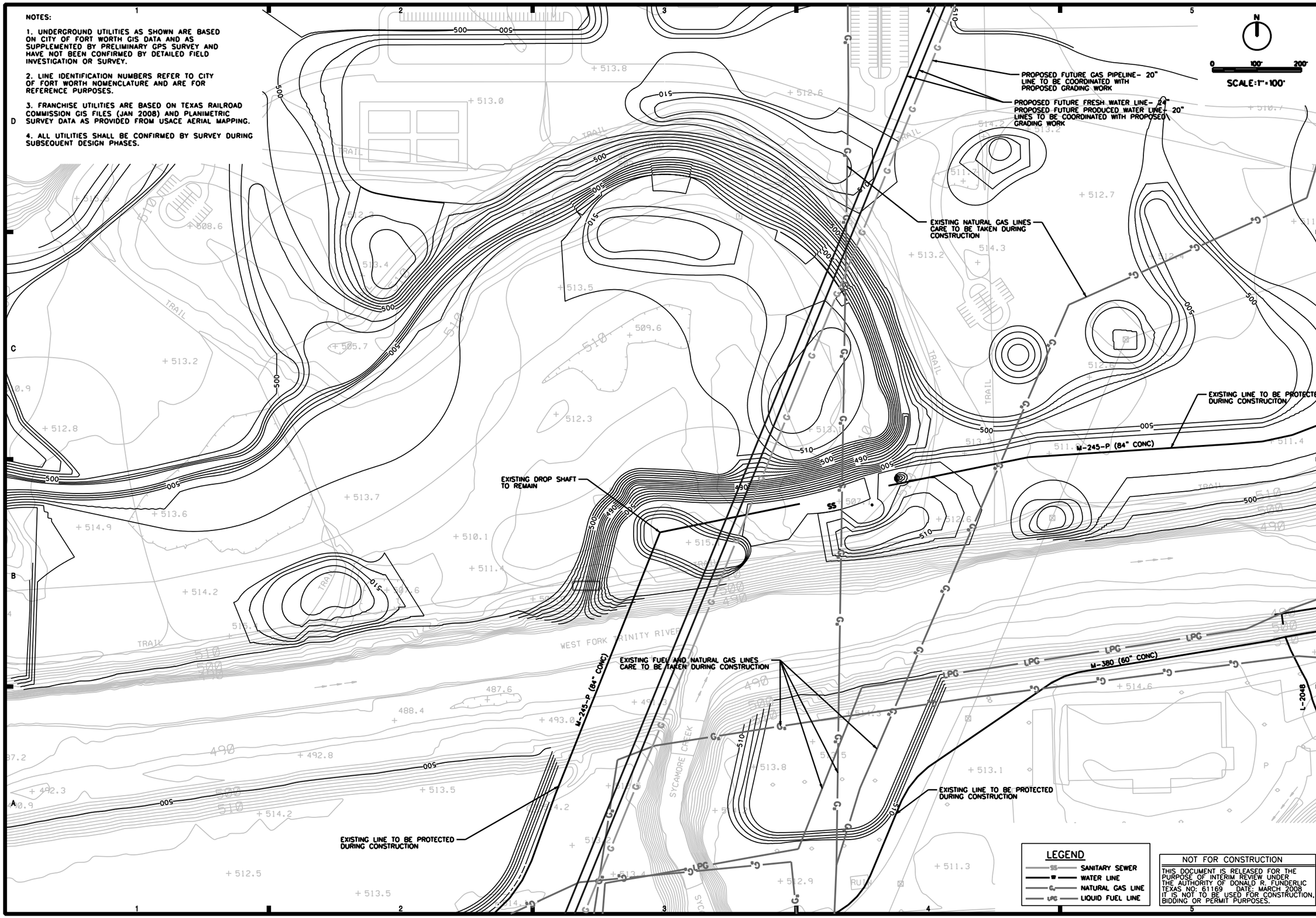
NOTES:

1. UNDERGROUND UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY.

2. LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.

3. FRANCHISE UTILITIES ARE BASED ON TEXAS RAILROAD COMMISSION GIS FILES (JAN 2008) AND PLANIMETRIC SURVEY DATA AS PROVIDED FROM USACE AERIAL MAPPING.

4. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

CDM

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Drawn by: JE REASON
Checked by: D. FUNDERLIC
Responsible P.E.: PERespondible
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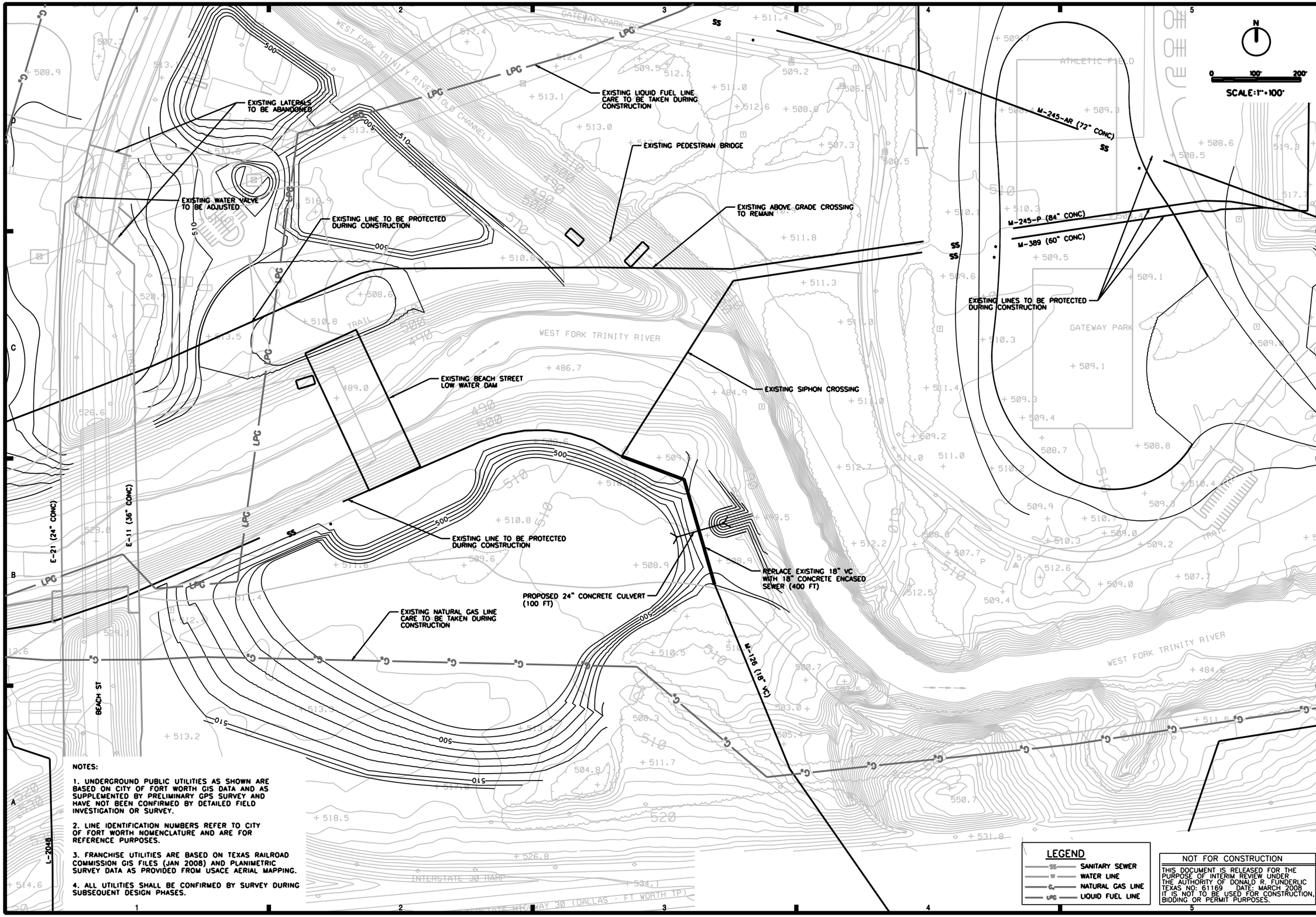
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
UTILITY PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CU-02



NOTES:

1. UNDERGROUND PUBLIC UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY.

2. LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.

3. FRANCHISE UTILITIES ARE BASED ON TEXAS RAILROAD COMMISSION GIS FILES (JAN 2008) AND PLANIMETRIC SURVEY DATA AS PROVIDED FROM USACE AERIAL MAPPING.

4. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.

LEGEND

- SS — SANITARY SEWER
- W — WATER LINE
- G — NATURAL GAS LINE
- LPG — LIQUID FUEL LINE

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	App.

CDM

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Set ID: SetID
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. GIBSON
Drawn by: J. HARRIS
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
Date/Initials: PEDate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
UTILITY PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CU-03

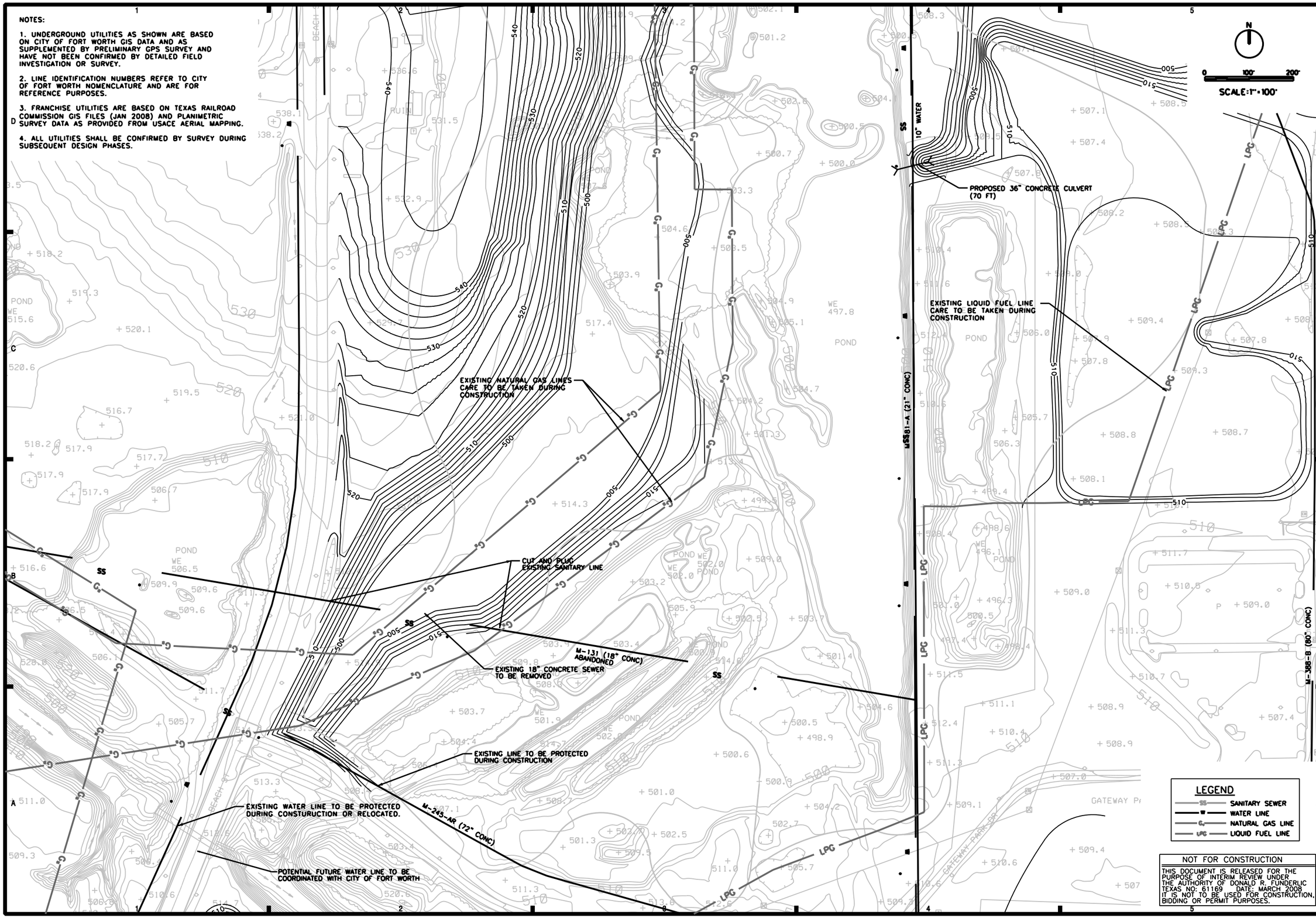
NOTES:

1. UNDERGROUND UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY.

2. LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.

3. FRANCHISE UTILITIES ARE BASED ON TEXAS RAILROAD COMMISSION GIS FILES (JAN 2008) AND PLANIMETRIC SURVEY DATA AS PROVIDED FROM USACE AERIAL MAPPING.

4. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

CDM

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Designed by:M. GILSON
Drawn by: J. HANNEL
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
Date/Initials: PEDate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
UTILITY PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CU-04

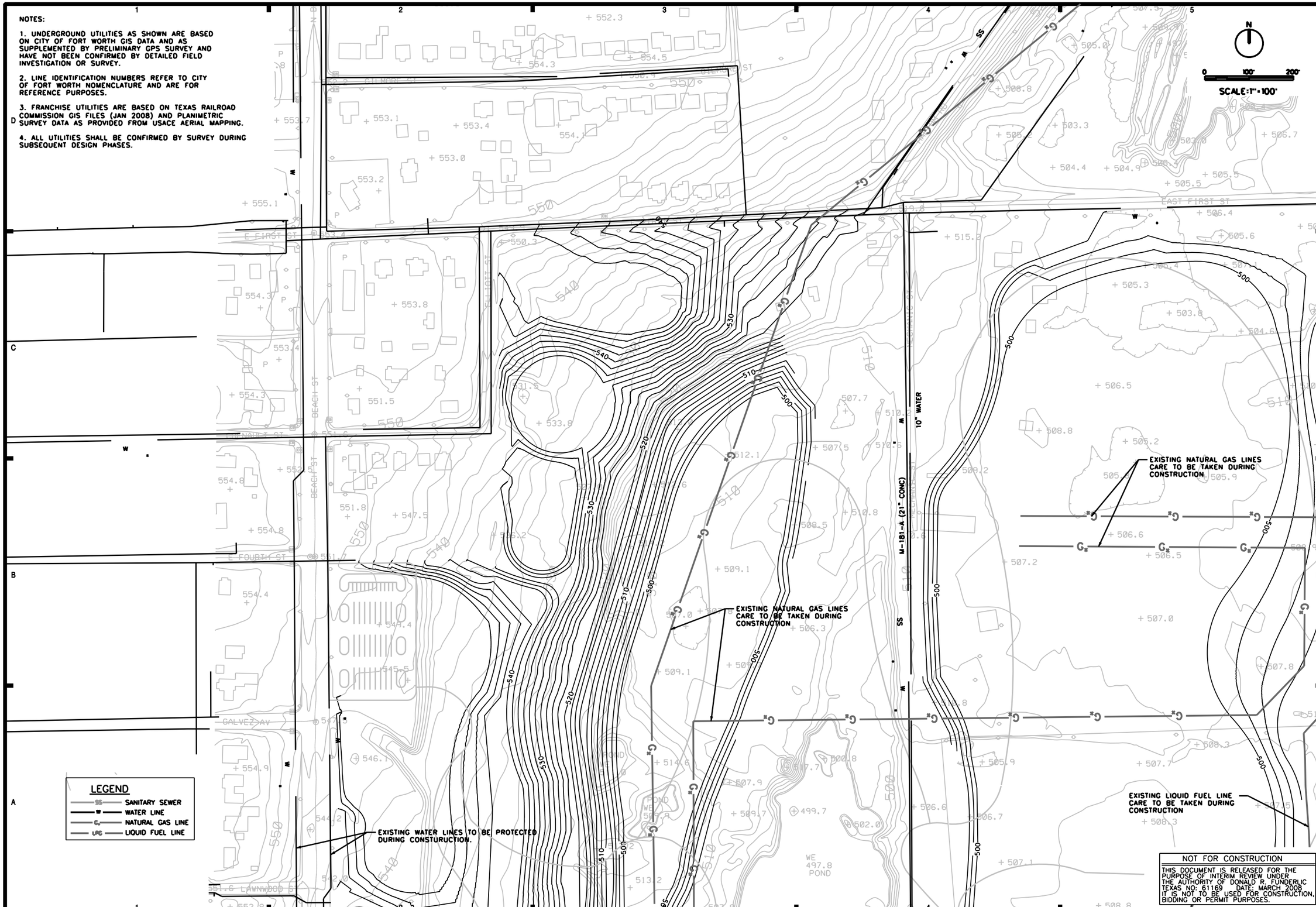
NOTES:

1. UNDERGROUND UTILITIES AS SHOWN ARE BASED ON CITY OF FORT WORTH GIS DATA AND AS SUPPLEMENTED BY PRELIMINARY GPS SURVEY AND HAVE NOT BEEN CONFIRMED BY DETAILED FIELD INVESTIGATION OR SURVEY.

2. LINE IDENTIFICATION NUMBERS REFER TO CITY OF FORT WORTH NOMENCLATURE AND ARE FOR REFERENCE PURPOSES.

3. FRANCHISE UTILITIES ARE BASED ON TEXAS RAILROAD COMMISSION GIS FILES (JAN 2008) AND PLANIMETRIC SURVEY DATA AS PROVIDED FROM USACE AERIAL MAPPING.

4. ALL UTILITIES SHALL BE CONFIRMED BY SURVEY DURING SUBSEQUENT DESIGN PHASES.



LEGEND

- SS — SANITARY SEWER
- W — WATER LINE
- G — NATURAL GAS LINE
- LPG — LIQUID FUEL LINE

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

CDM

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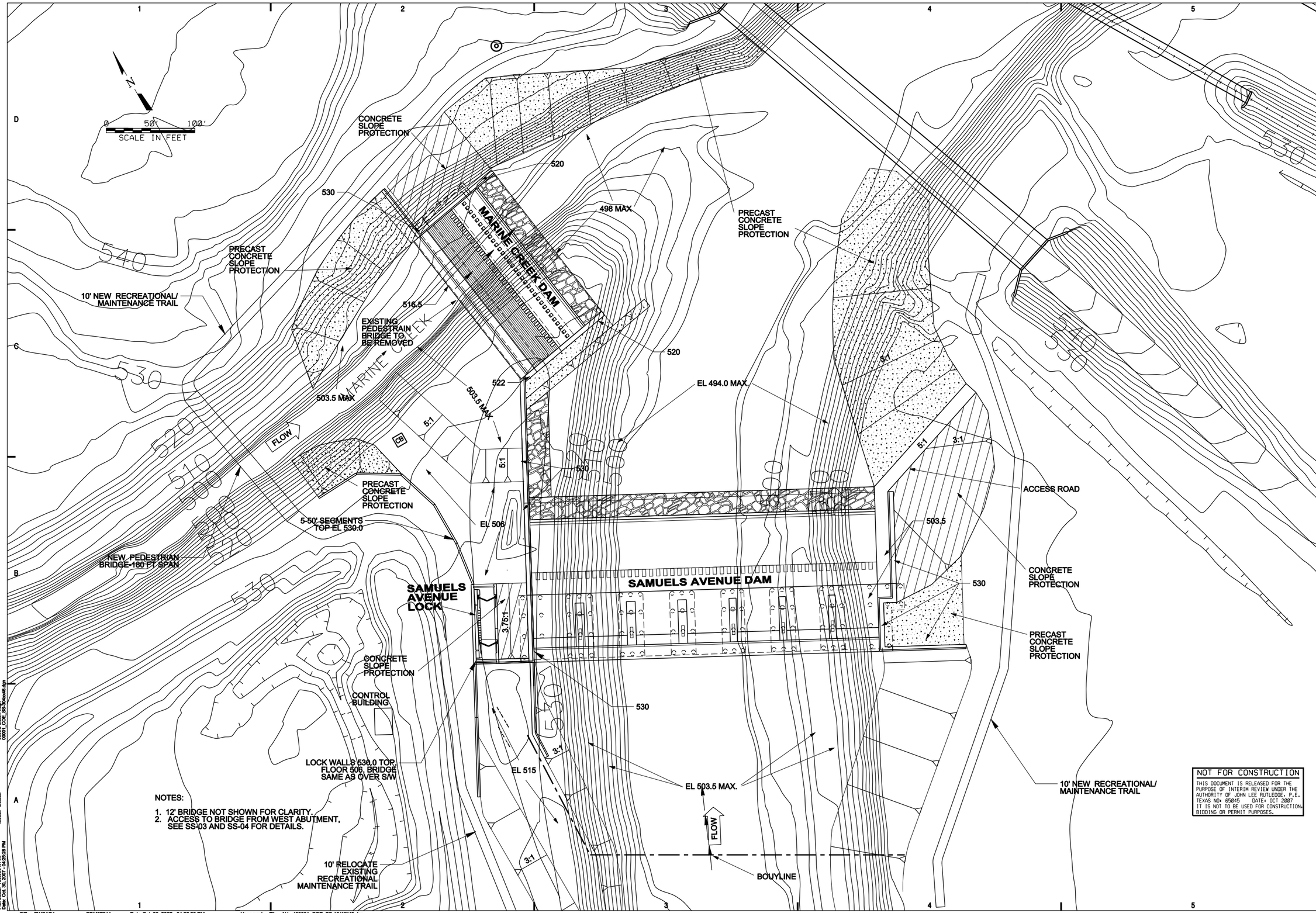
Size: ANSI D
Plot date: AUGUST 2007
Designed by: M. OLESON
Drawn by: J. PRANGE
Checked by: D. FUNDERLIC
Responsible P.E.: PEResponsible
License Number: PELicenseNum
LicenseState: PESlate

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
VALLEY STORAGE MITIGATION
UTILITY PLAN
OXBOW-GATEWAY SITE

SHEET IDENTIFICATION

CU-05



NOTES:

1. 12' BRIDGE NOT SHOWN FOR CLARITY.
2. ACCESS TO BRIDGE FROM WEST ABUTMENT, SEE SS-03 AND SS-04 FOR DETAILS.

NOT FOR CONSTRUCTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF JOHN LEE RUTLEDGE, P.E. TEXAS NO: 65045 DATE: OCT 2007 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: 00001_COE_SS-101XX43.dgn
Set ID.: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: JLR
Drawn by: MLP
Checked by:
Responsible P.E.: JOHN L. RUTLEDGE
License Number: 65045
LicenseState: TEXAS

CDM

Freese and Nichols

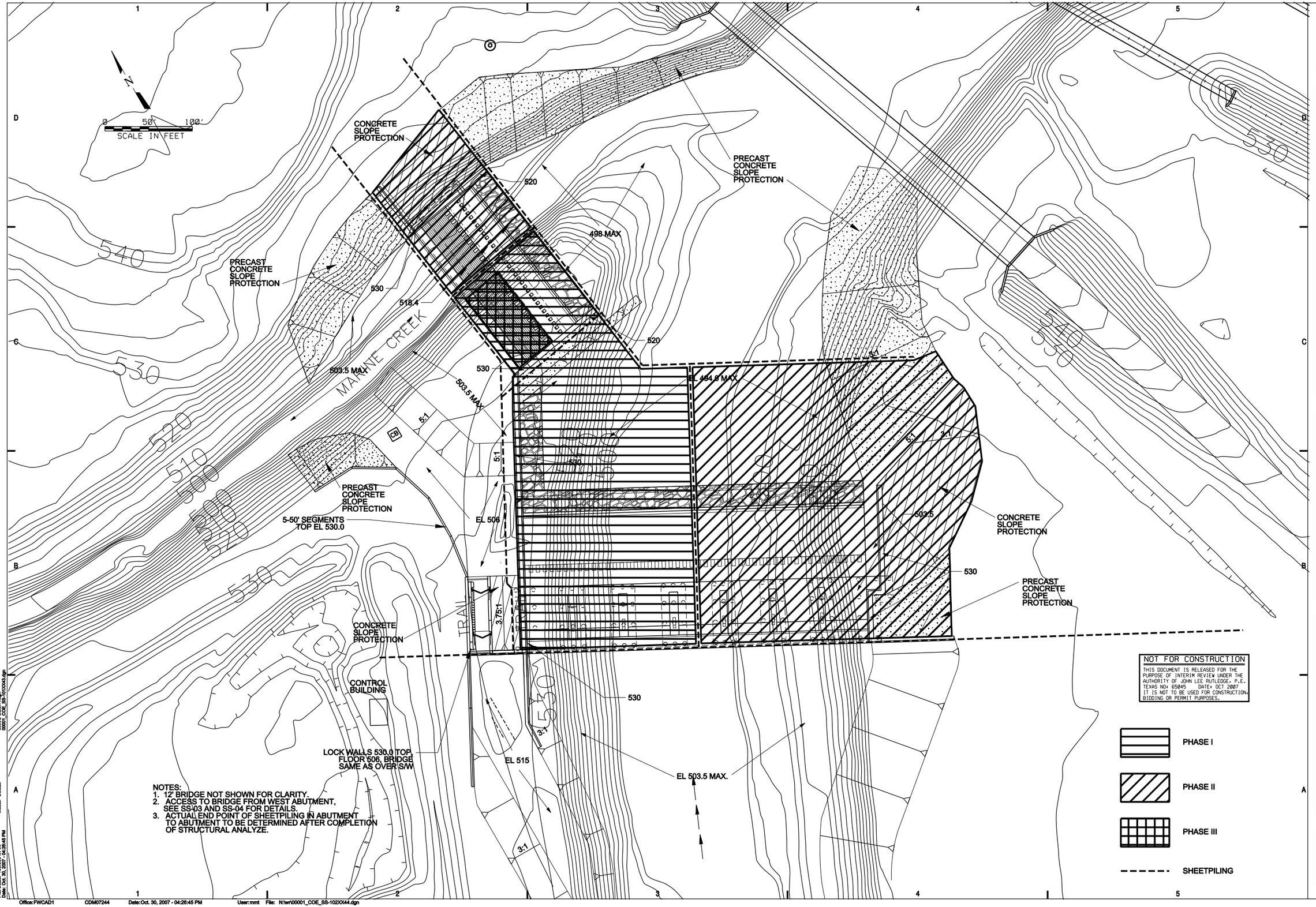
FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
SAMUELS AVENUE LOCK & DAM
SITE PLAN

SHEET IDENTIFICATION

SS-01

MicroStation V8 User: mmt Office: FWCAD1
CDM07244 N:\wr\00001_COE_SS-101XX43.dgn
Plotter: J:\Plotdrv_XM\PDF_File\PDF-Mono-Half.plt
Plot Scale: 100.000 ft / in. Model: Default
Date: Oct. 30, 2007 - 04:25:28 PM

Office:FWCAD1 CDM07244 Date:Oct. 30, 2007 - 04:25:28 PM User:mmt File: N:\wr\00001_COE_SS-101XX43.dgn



NOTES:
1. 12' BRIDGE NOT SHOWN FOR CLARITY.
2. ACCESS TO BRIDGE FROM WEST ABUTMENT, SEE SS-03 AND SS-04 FOR DETAILS.
3. ACTUAL END POINT OF SHEETPILING IN ABUTMENT TO ABUTMENT TO BE DETERMINED AFTER COMPLETION OF STRUCTURAL ANALYZE.

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: 00001_COE_SS-102XX44.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: JLR
Drawn by: MLP
Checked by: JLR
Responsible: P.E.: JOHN L. RUTLEDGE
License Number: 65045
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
SAMUEL AVENUE LOCK & DAM
PHASING PLAN

SHEET IDENTIFICATION

SS-02

00002-SSbor01.dgn
00001_COE_SS-102XX44.dgn
C-SPc31.dgn
00002-SSbor11.dgn
00001_COE_SS-102XX45.dgn

MicroStation V8 User: mmt Office: FWCAD1
Workspace: mwf_cdm_fwc Project: CDM07244
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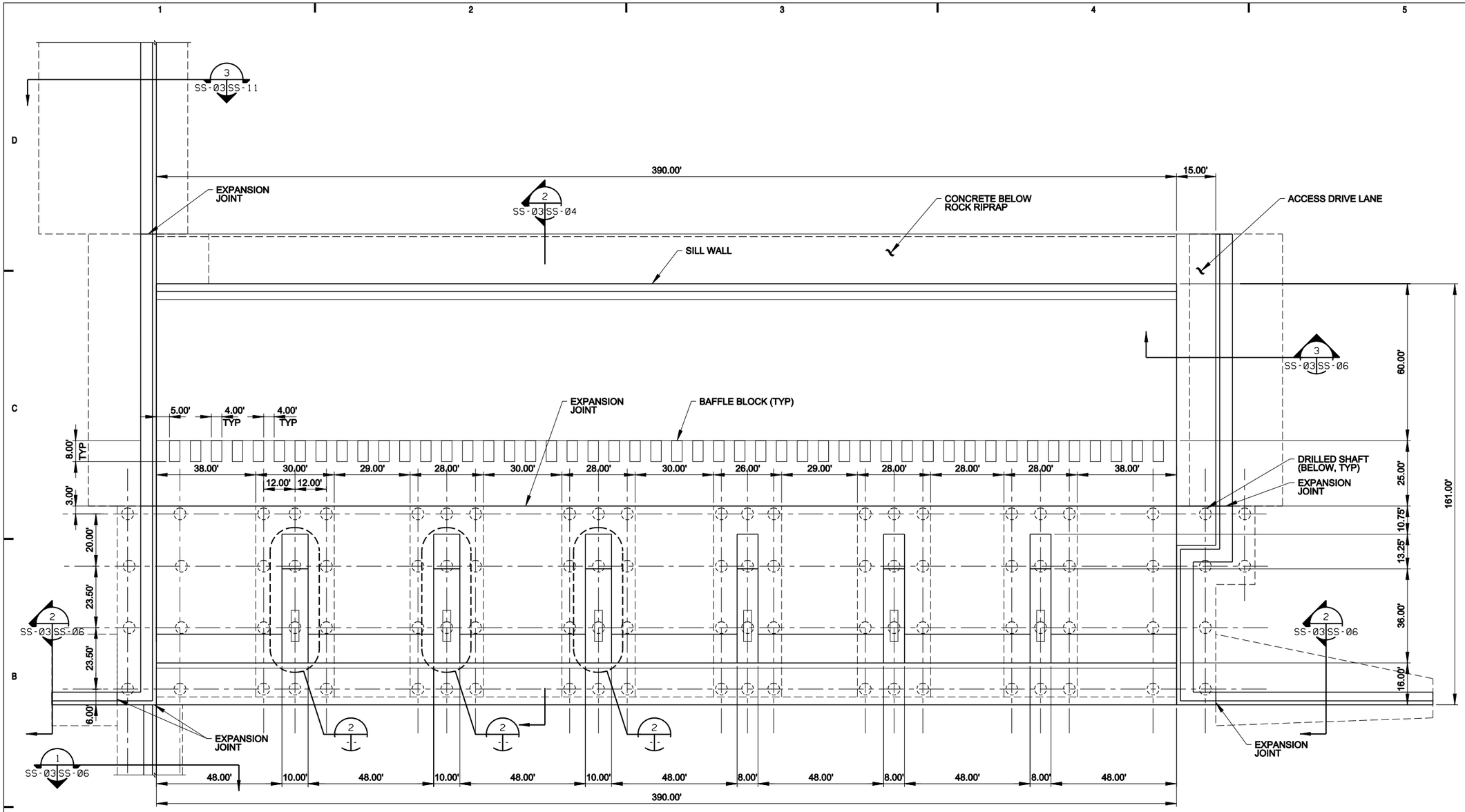
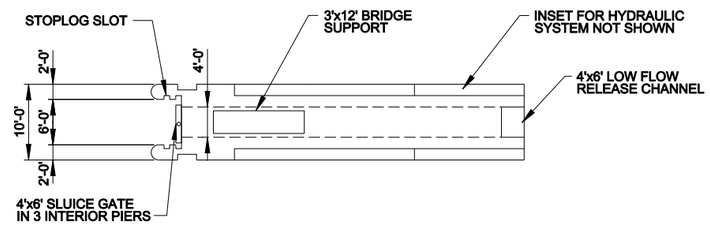
Plot Scale: 100.000 ft / in. Model: Default
Date: Oct. 30, 2007 - 04:26:45 PM

Office:FWCAD1 CDM07244 Date:Oct. 30, 2007 - 04:26:45 PM User:mmt File: N:\wr\00001_COE_SS-102XX44.dgn



1 SAMUEL AVENUE DAM PLAN
1" = 20'

FLOW



2 PLAN OF LOW FLOW PIER
1" = 10'

NOTE:
STOP LOGS TO BE STORED ON UPSTREAM SIDE OF BRIDGE, NOT SHOWN. STEM FOR SLUICE GATES WILL EXTEND TO AND BE ATTACHED TO THE BRIDGE.

NOT FOR CONSTRUCTION

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0 10' 20'
SCALE: 1" = 10'

0 10' 20' 40'
SCALE: 1" = 20'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-PL-FHDM.dgn
Set ID: SMD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BMW
Drawn by: BMW/JAW
Checked by: -
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM

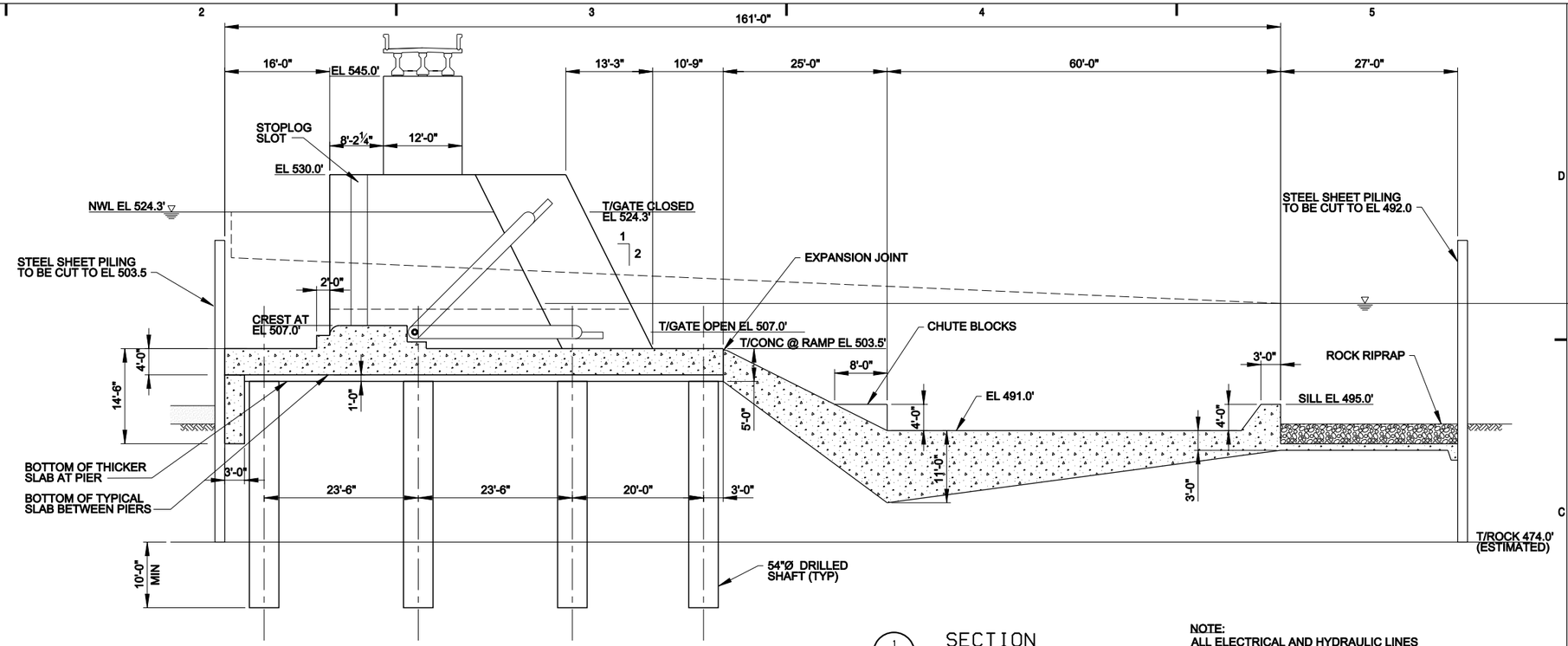
Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
PLAN
-

SHEET IDENTIFICATION
SS-03

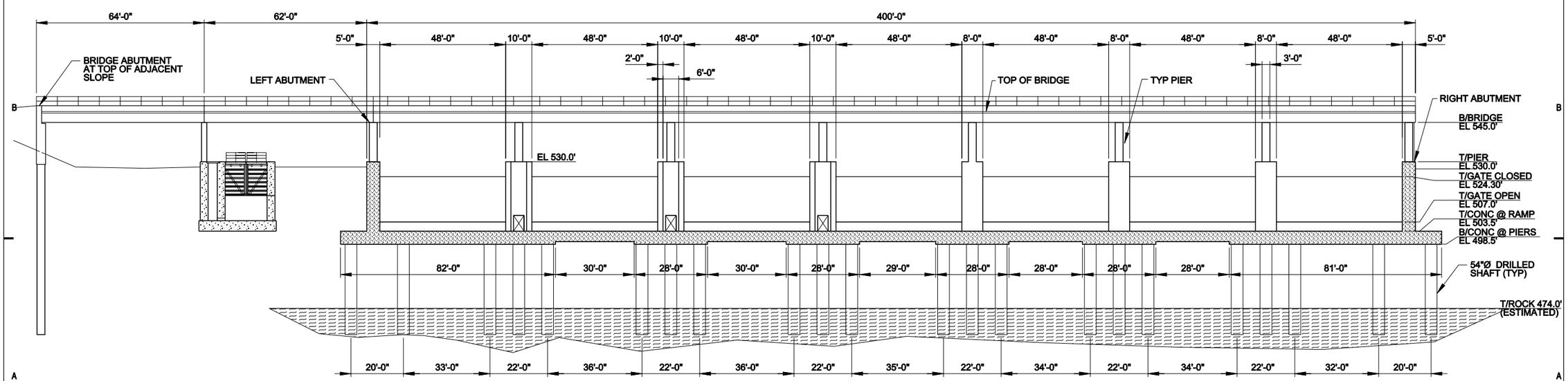
ST-SAM-PL-BASE.DGN
00003-SS-03xx45.dgn
00003-SS-03xx11.dgn

MicroStation V8 User: mmt Office: FWCAD1
Cell: ANSI_A_Landscape Date: 10/26/2007
Plotter: HPDesignJet_T610-44in-HPGL2
Plot Scale: 40.000 / 1 Mode: Default
Date: Oct. 26, 2007 / 08:13:55 AM



1 SECTION
SS-03 SS-04 1" = 10'

NOTE:
ALL ELECTRICAL AND HYDRAULIC LINES FOR GATE OPERATORS ARE TO BE RUN IN CONDUITS ON THE BRIDGE AND IN ENCASED CONDUIT AT EACH PIER.



2 UPSTREAM ELEVATION
SS-03 SS-04 1" = 20'

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0 10' 20'
SCALE: 1" = 10'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-CONC.dgn
Set ID: SaMD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/GAW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
SECTION AND ELEVATION
-

SHEET IDENTIFICATION
SS-04

ST-SAM-SC-BASE.dgn
ST-SAM-EL-BASE.dgn
00000-Sbxx11.dgn
ST-SAM-EL-BASE.dgn

MicroStation V8 User: mmt Office: FWCAD1
ST-SAM-SC-CONC.dgn Level: SS-03-Section
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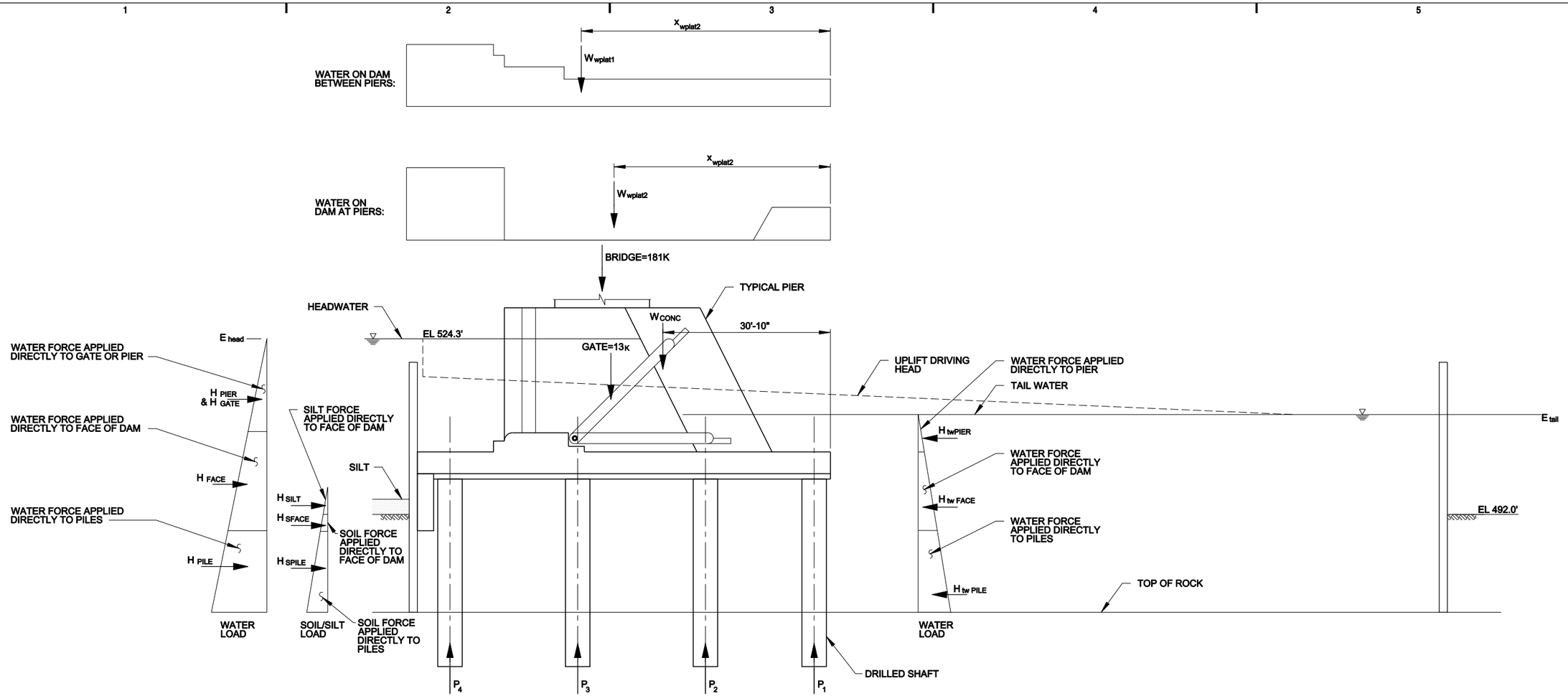
Date: Oct 26, 2007 08:12:46 AM



NOTES:
FORCES SHOWN ARE BASED ON A TYPICAL DISTANCE OF 58'-0" BETWEEN GATE CENTERLINES.

STABILITY ANALYSIS

1" = 10'

	Load Case	E_{head} (ft-MSL)	E_{tail} (ft-MSL)	Vertical Forces on Drilled Shaft Supported Platform (kips per pier): Concrete	Water Above Platform				Uplift		Lateral Forces (kips per pier)									Forces on Drilled Shafts (kips per pier for line of shafts)			
				W_{conc}	W_{wplat1}	x_{wplat1}	W_{wplat2}	x_{wplat2}	U	x_U	H_{pier}	H_{gate}	H_{face}	H_{pile}	H_{sface}	H_{spile}	H_{twface}	H_{twpile}	H_{twpier}	P_1	P_2	P_3	P_4
1	No Flow	524.3	499	4923.5	1573.9	-62.9	204.6	-68.1	2786.0	-42.9	104.7	502.3	1651.5	1095.7	60	234.9	150	407.8	31.3	-27.8	189.3	444.4	699.5
2	10-yr	524.3	517.6	4923.5	3329.1	-42.5	309.4	-47.4	4295.1	-39.3	104.7	502.3	1651.5	1095.7	60	234.9	1050.4	855.4	218.8	135.4	270.4	429	587.6
3	25-yr	524.4	520.8	4923.5	4009.8	-39.5	361.7	-42.0	4565.6	-38.9	105.8	507.8	1657.7	1098.4	60	234.9	1445.9	980	301.2	211.1	323.3	455.1	587
4	100-yr	526.5	525	4923.5	5051.6	-37.8	456.6	-38.1	5134.9	-38.7	131.3	633.1	1787.1	1155.5	60	234.9	1943.3	1114.7	405	286.5	381.4	493	604.6
5	500-yr	533.6	531.4	4923.5	6617.2	-37.9	696.8	-37.8	6427.2	-38.6	234	1012.9	2224.7	1348.5	60	234.9	2621	1288.7	561.2	328.8	424.1	536	647.9
6	SPF	540.7	537.8	4923.5	8159.0	-37.9	1018.0	-37.9	7719.4	-37.9	340.5	1402.2	2662.2	1541.5	60	234.9	3298.8	1462.7	725.2	373.3	470.4	584.6	698.8

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0 10' 20'
SCALE: 1" = 10'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

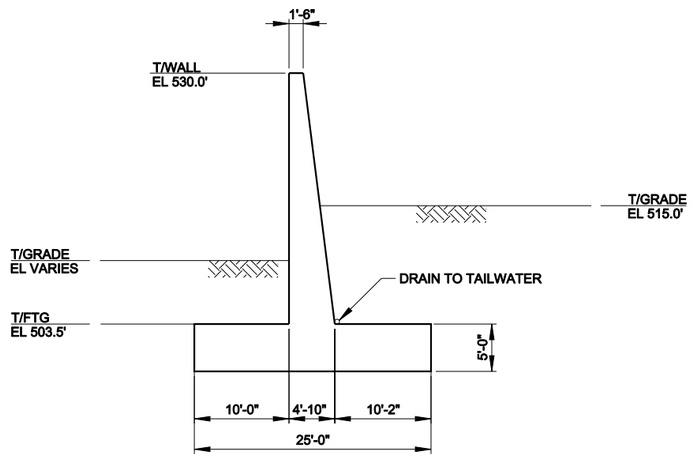
Design file: ST-SAM-SC-DAM01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWM
Drawn by: BWM
Checked by: JB
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

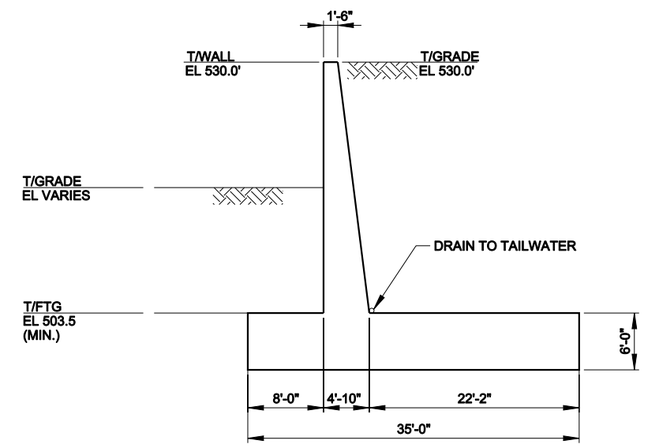
Parsons and Nicholas

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
STABILITY ANALYSIS
-

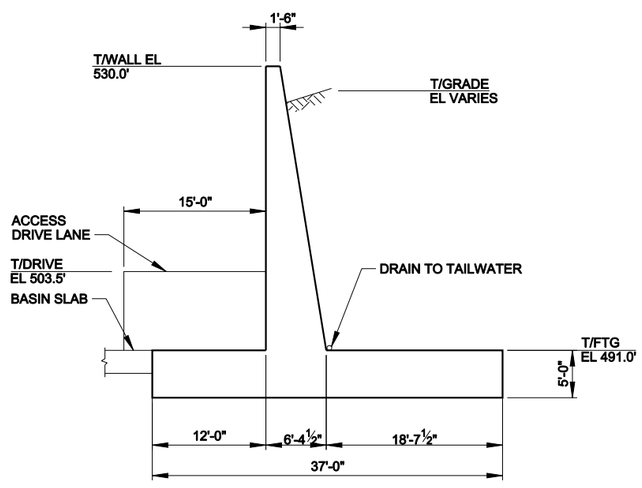
SHEET IDENTIFICATION
SS-05



1 RIGHT TRAINING WALL AT LOCK
SS-03 SS-06 1/8"=1'-0"



2 LEFT AND RIGHT TRAINING WALLS
SS-03 SS-06 1/8"=1'-0"



3 RIGHT ABUTMENT WALL
SS-03 SS-06 1/8"=1'-0"

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8' 0 8' 16'
1/8"=1'-0"

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/KJB
Checked by: -
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
TRAINING WALLS AND RIGHT ABUTMENT WALL
DIMENSIONS

SHEET IDENTIFICATION

SS-06

MicroStation V8 User: mmt Office: FWCAD1
CDM07244 N:\st\00001_COE_SS-606xx48.dgn
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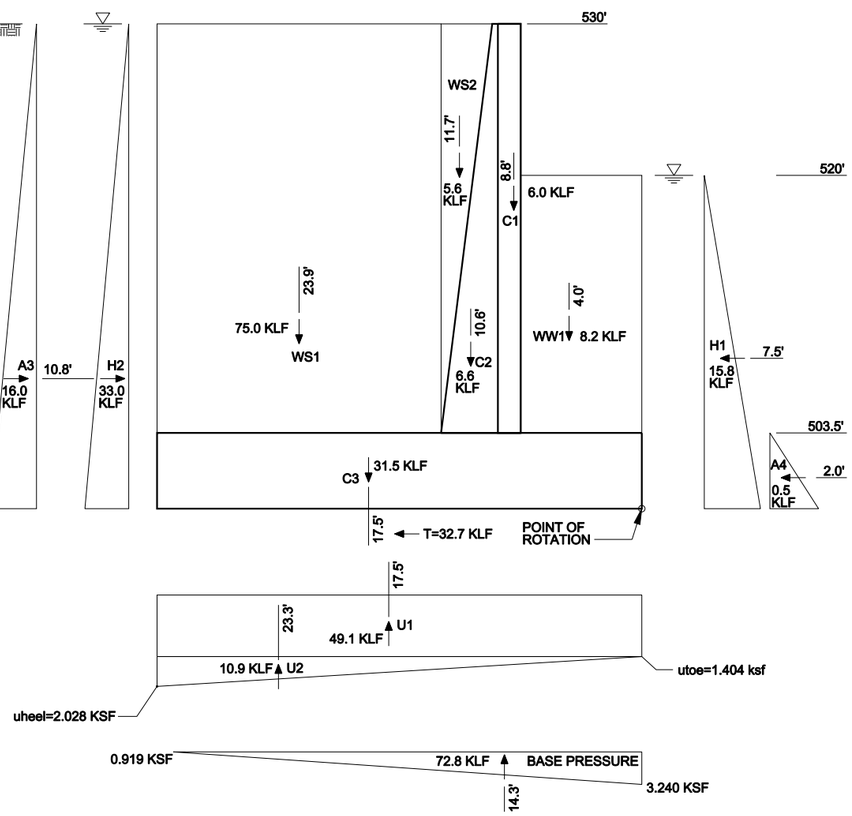
Plot Scale: 16:0.000 " / in. Model: Default
Date: Oct. 26, 2007 - 08:16:01 AM

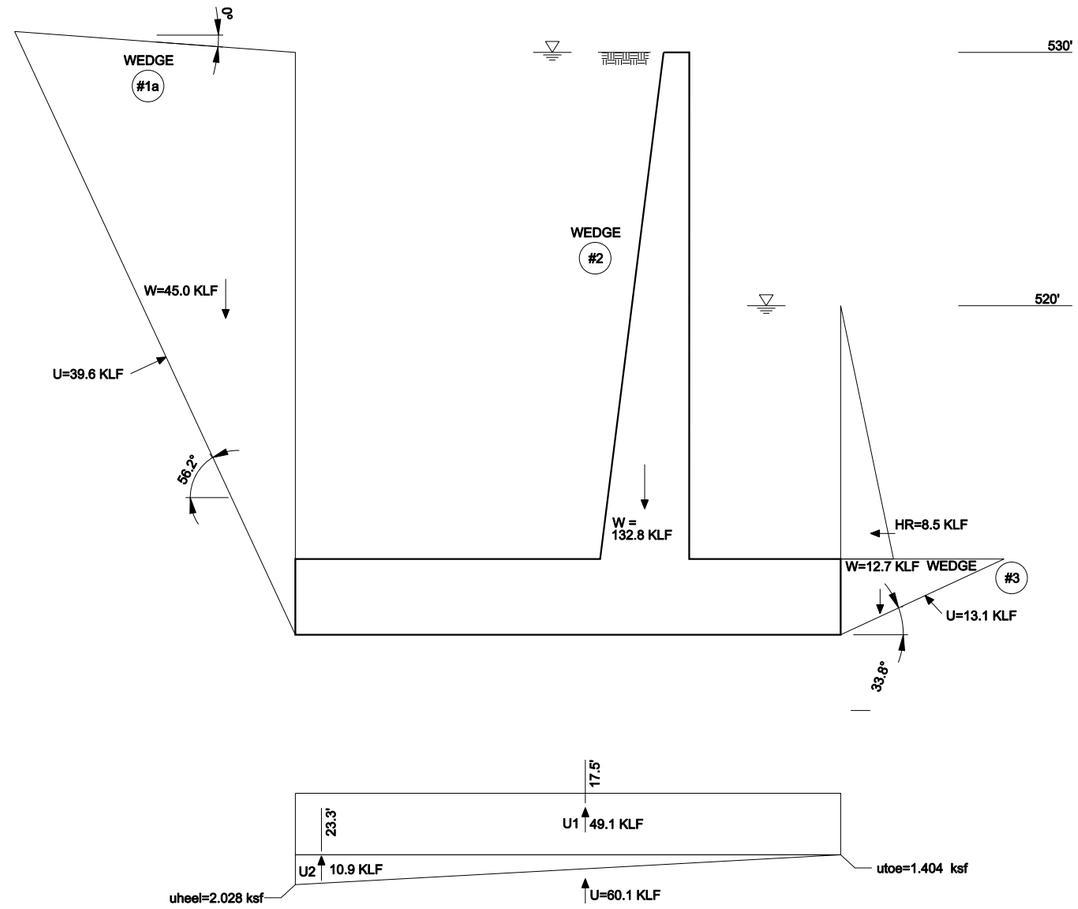
00000-BSxx01.dgn
00000-BSxx11.dgn

Office:FWCAD1 CDM07244 Date:Oct. 26, 2007 - 08:16:01 AM User:mmt File: N:\st\00001_COE_SS-606xx48.dgn



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	520.0	32.7	0.0	72.8	3.25	100.0	0.919	3.240	13.73
1(b)	523.4	513.4	34.5	0.0	84.4	2.10	100.0	1.544	3.276	13.98
1(c)	516.8	506.8	35.0	0.0	95.9	1.14	100.0	2.205	3.246	14.31
1(d)	510.1	503.5	33.1	0.0	105.5	0.40	100.0	2.806	3.221	14.81
1(e)	503.5	503.5	31.2	0.0	113.1	-0.10	100.0	3.288	3.174	15.14

SLIDING ANALYSIS SUMMARY									
LOAD CASE	WATER @ HEEL	WATER @ TOE	DRIVING WEDGE		STRUCTURAL		RESISTING		FS SLIDE
			Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	530.0	520.0	32	0.0	32	0.0	32	0.0	1.51
1(b)	523.4	513.4	32	0.0	32	0.0	32	0.0	1.61
1(c)	516.8	506.8	32	0.0	32	0.0	32	0.0	1.73
1(d)	510.1	503.5	32	0.0	32	0.0	32	0.0	1.89
1(e)	503.5	503.5	32	0.0	32	0.0	32	0.0	2.03

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	24.1	2899	36.7	4164
1(b)	24.7	2654	46.4	5643
1(c)	23.9	2418	56.5	7183
1(d)	22.2	2293	65.2	8547
1(e)	21.5	2274	72.1	9640

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE HEEL RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 530.0-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DAM201.dgn
Set ID: BeID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BRW
Drawn by: BRW/AW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
RIGHT TRAINING WALL
STABILITY ANALYSIS

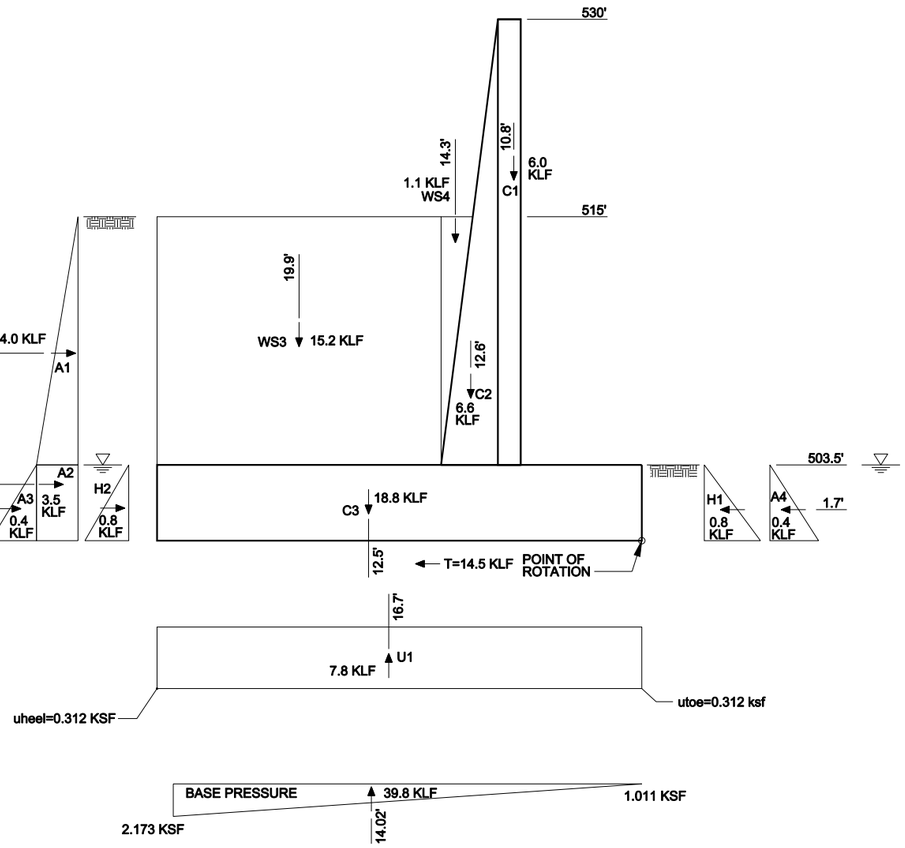
SHEET IDENTIFICATION

SS-07

00000-SSbs01.dgn
00000-SSbs11.dgn

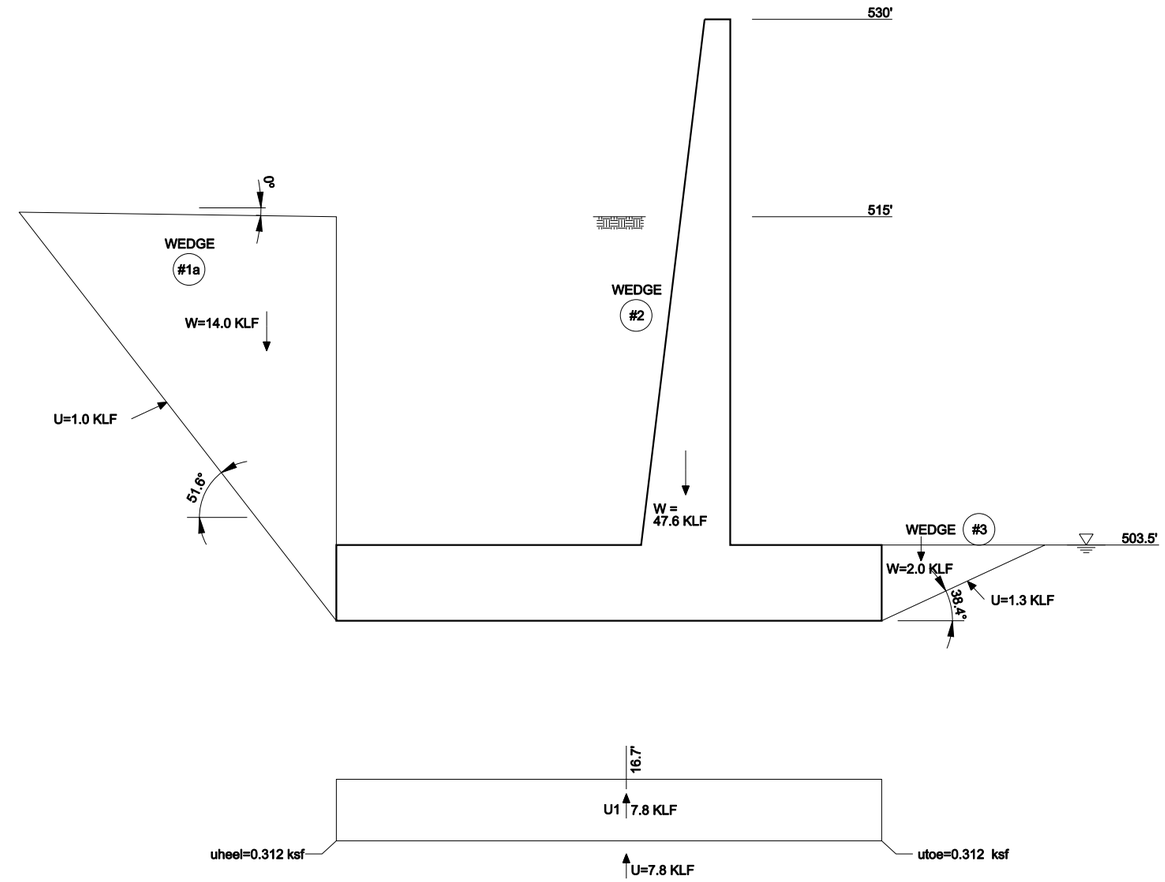
MicroStation V8 User: mmt Office: FWCAD1
Workspace: Workset: CDM_Workset
Plotter: JXPfinder_XWPDF_FileDPF-Mono-Half.pit
Plot Scale: 1:100.00 / 1 in. Mode: Default
Date: Oct. 25, 2007 - 05:25:35 PM

Office:FWCAD1 CDM07244 Date:Oct. 25, 2007 - 05:02:36 PM User:mmt File: N:\st00001_COE_SS-607xx49.dgn



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	530.0	3.8	0.0	26.4	-1.12	100.0	1.341	0.774	61.18
1(b)	523.4	523.4	3.8	0.0	27.2	-1.04	100.0	1.361	0.817	60.51
1(c)	516.8	516.8	3.8	0.0	28.4	-0.95	100.0	1.394	0.875	59.33
1(d)	510.1	510.1	5.9	0.0	33.4	-1.07	100.0	1.679	0.995	49.00
1(e)	503.5	503.5	7.6	0.0	39.8	-1.52	100.0	2.173	1.011	36.98

SLIDING ANALYSIS SUMMARY									
LOAD CASE	WATER @ HEEL	WATER @ TOE	DRIVING WEDGE		STRUCTURAL		RESISTING		FS SLIDE
			Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	530.0	530.0	32	0.0	32	0.0	32	0.0	5.55
1(b)	523.4	523.4	32	0.0	32	0.0	32	0.0	4.62
1(c)	516.8	516.8	32	0.0	32	0.0	32	0.0	3.75
1(d)	510.1	510.1	32	0.0	32	0.0	32	0.0	2.84
1(e)	503.5	503.5	32	0.0	32	0.0	32	0.0	2.66

SHEAR AND MOMENT ANALYSIS SUMMARY				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	2.0	93	12.5	787
1(b)	2.0	93	12.7	802
1(c)	2.0	93	13.1	824
1(d)	3.4	168	15.7	988
1(e)	4.0	186	19.7	1255

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS RAGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 503.5-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

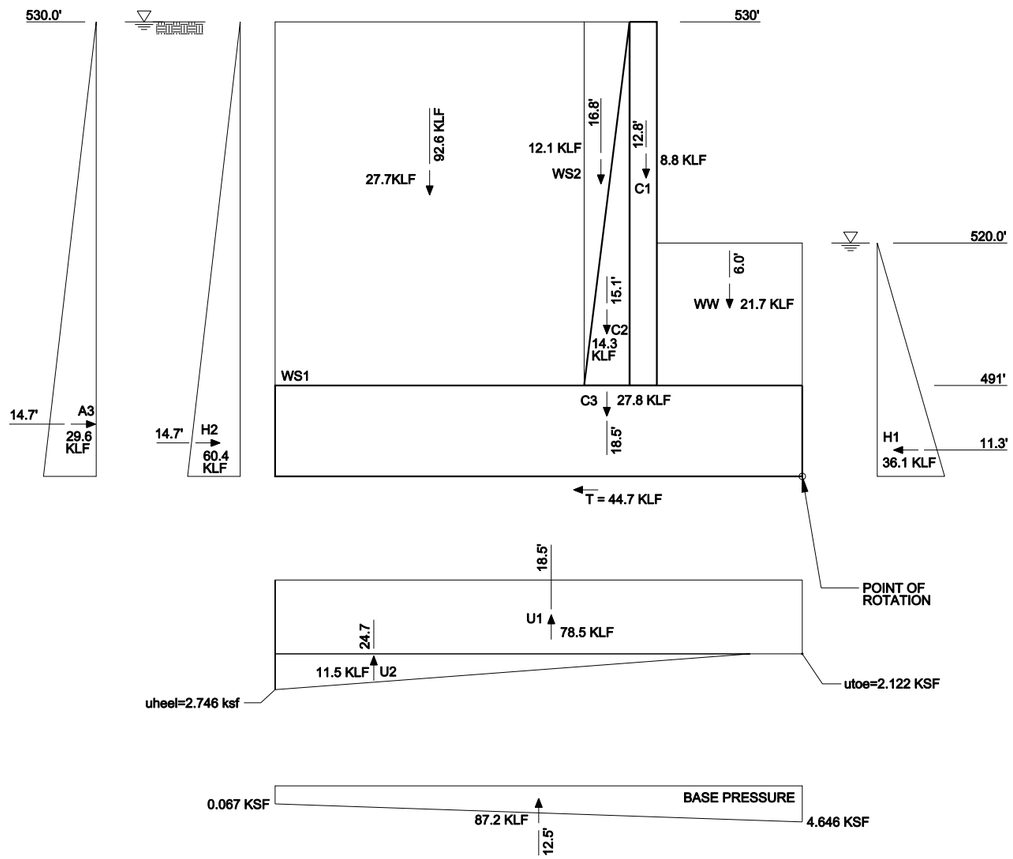
Design file: ST-SAM-SC-DAG01.dgn
Set O: 8mD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWW
Drawn by: BWW/JB
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
LEFT TRAINING WALL
STABILITY ANALYSIS

SHEET IDENTIFICATION

SS-08



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	520.0	53.9	0.0	87.2	5.99	100.0	0.067	4.646	4.47
1(b)	521.5	511.5	58.9	0.0	100.9	4.57	100.0	0.707	4.749	4.43
1(c)	513.0	503.0	61.7	0.0	114.7	3.20	100.0	1.493	4.705	4.53
1(d)	504.5	494.5	62.4	0.0	128.4	2.00	100.0	2.342	4.596	4.68
1(e)	496.0	491.0	60.0	0.0	140.0	1.16	100.0	3.074	4.494	4.83

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	44.5	7984	46.8	3587
1(b)	48.2	7982	49.1	3726
1(c)	49.7	7713	50.2	4229
1(d)	49.0	7401	54.2	5662
1(e)	46.9	7258	63.9	6895

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

NOTE:

THE DAM AND BASIN ARE ASSUMED TO BE CAPABLE OF RESISTING THE NET SLIDING FORCE ON THE WALL.

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE HEEL RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 499.0-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF BRAD B. WATSON TEXAS NO: 80318 DATE: OCT 2007 IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

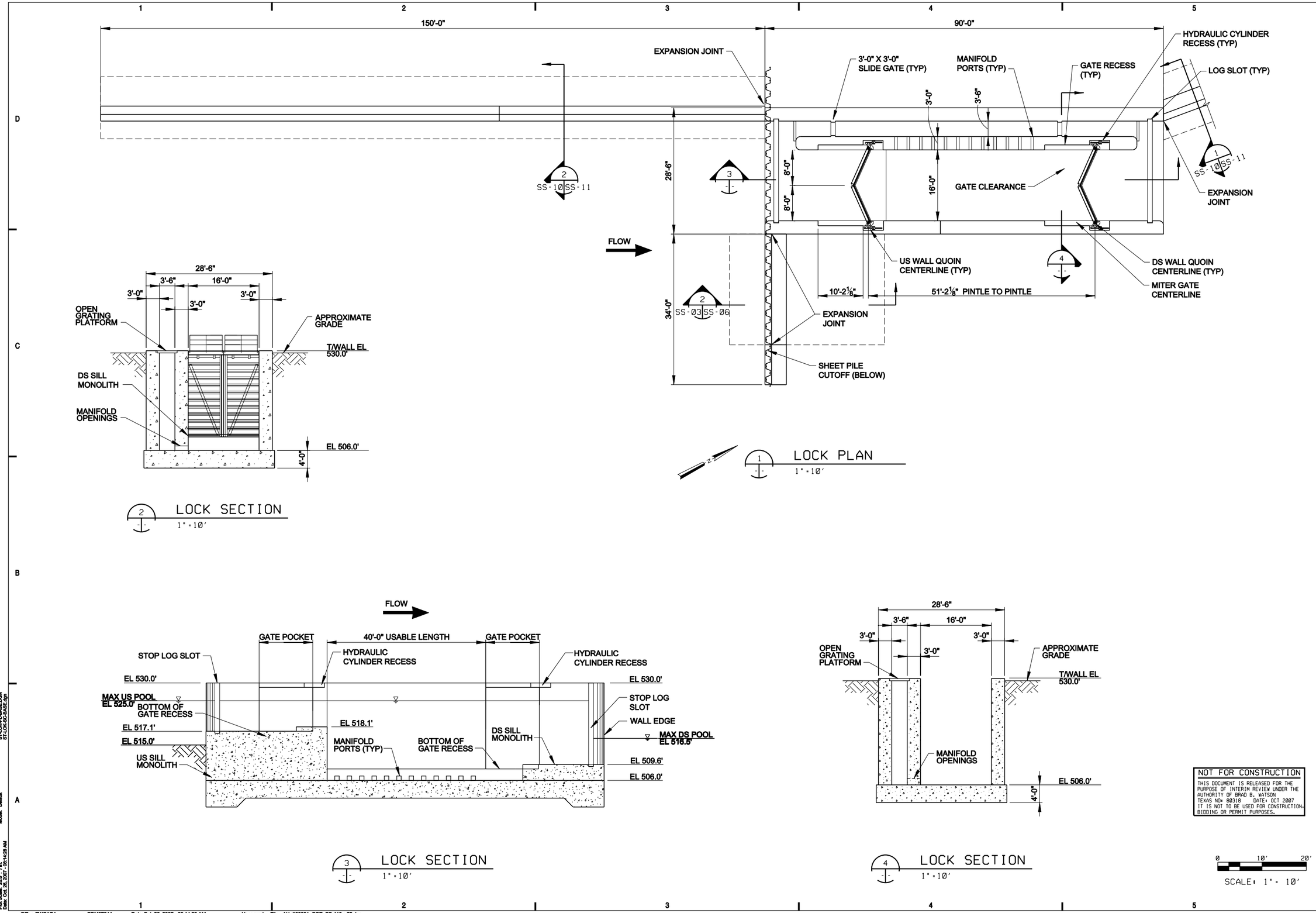
Design file: 07-6A44-SC-DAG01.dgn
Set ID: 8eWD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/KAB
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
RIGHT ABUTMENT WALL
STABILITY ANALYSIS

SHEET IDENTIFICATION

SS-09



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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-PL-FNDN.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/JAW
Checked by: -
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
LOCK
PLAN AND SECTION

SHEET IDENTIFICATION

SS-10

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Plot Scale: 20.0 ' / in. Model: Default
Date: Oct. 26, 2007 - 08:14:28 AM

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00000-BSxx11.dgn
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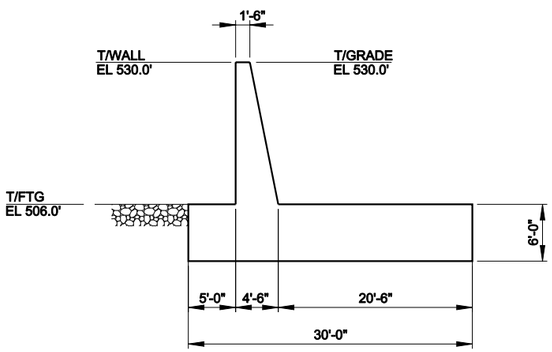
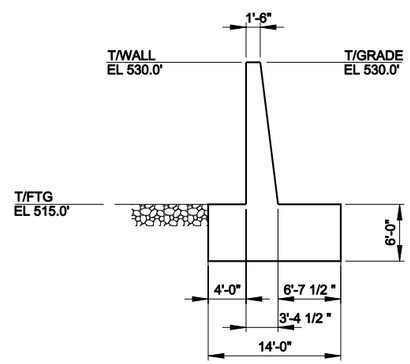


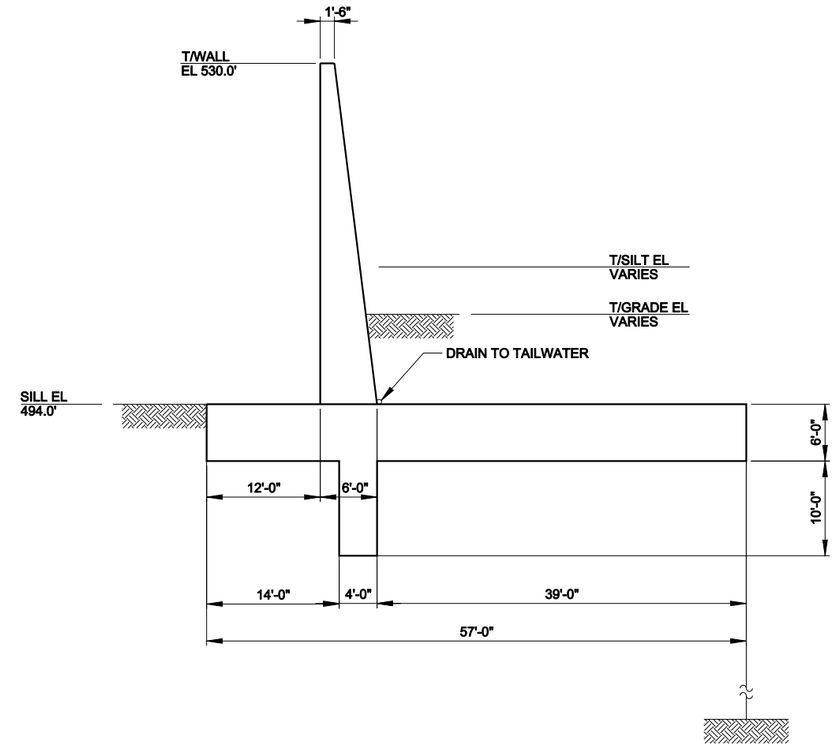
DOWNSTREAM
TRAINING WALL AT LOCK

1
SS-10 SS-11 1/8"=1'-0"



LEFT TRAINING
WALL AT LOCK

2
SS-10 SS-11 1/8"=1'-0"



FLOOD WALL

3
SS-10 SS-11 1/8"=1'-0"

NOT FOR CONSTRUCTION

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8' 0 8' 16'
1/8"=1'-0"

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: 01-SAM-SO-DAM01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BWMJAW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

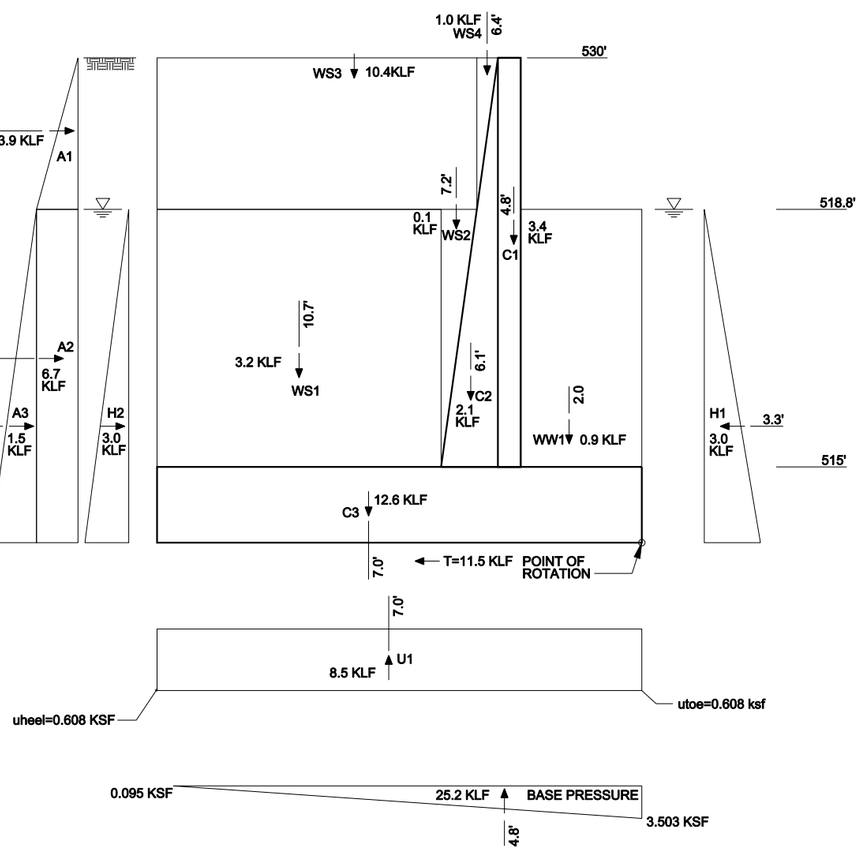
CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
TRAINING WALLS AT LOCK AND FLOOD WALL
DIMENSIONS

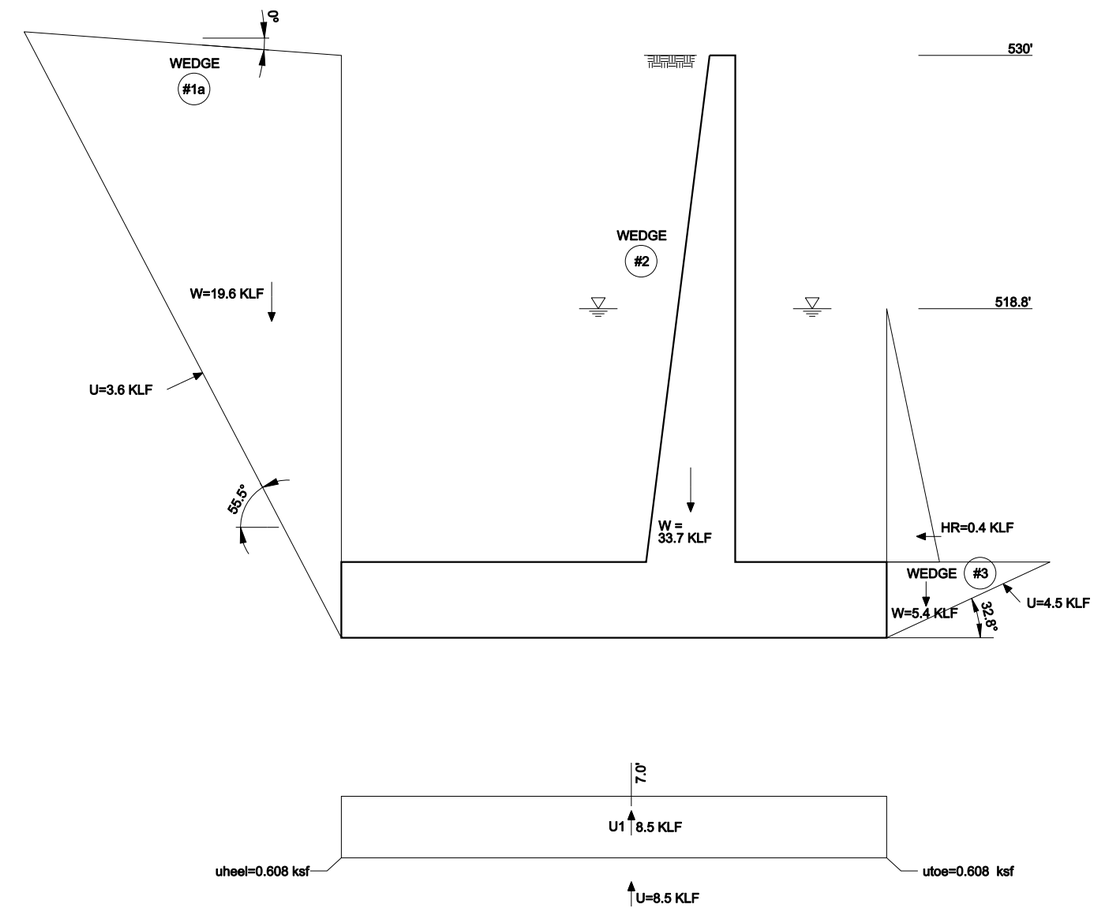
SHEET IDENTIFICATION

SS-11



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	530.0	6.2	0.0	17.9	1.56	100.0	0.426	2.137	14.41
1(b)	526.3	526.3	8.4	0.0	20.4	2.16	100.0	0.106	2.804	10.84
1(c)	522.5	522.5	10.1	0.0	22.8	2.32	100.0	0.011	3.242	9.34
1(d)	518.8	518.8	11.5	0.0	25.2	2.21	100.0	0.095	3.503	8.67
1(e)	515.0	515.0	12.4	0.0	27.6	1.97	100.0	0.306	3.635	8.39

SLIDING ANALYSIS SUMMARY									
LOAD CASE	WATER @ HEEL	WATER @ TOE	DRIVING WEDGE		STRUCTURAL		RESISTING		FS SLIDE
			Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	530.0	530.0	32	0.0	32	0.0	32	0.0	2.00
1(b)	526.3	526.3	32	0.0	32	0.0	32	0.0	1.77
1(c)	522.5	522.5	32	0.0	32	0.0	32	0.0	1.67
1(d)	518.8	518.8	32	0.0	32	0.0	32	0.0	1.63
1(e)	515.0	515.0	32	0.0	32	0.0	32	0.0	1.63

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	3.4	206	7.6	190
1(b)	4.9	325	9.7	244
1(c)	6.0	387	11.1	282
1(d)	6.7	409	12.1	305
1(e)	6.9	412	12.6	319

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS RANGING FROM THE RETAINED GRADE ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 518.8-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF BRAD B. WATSON TEXAS NO. 80318 DATE: OCT 2007. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

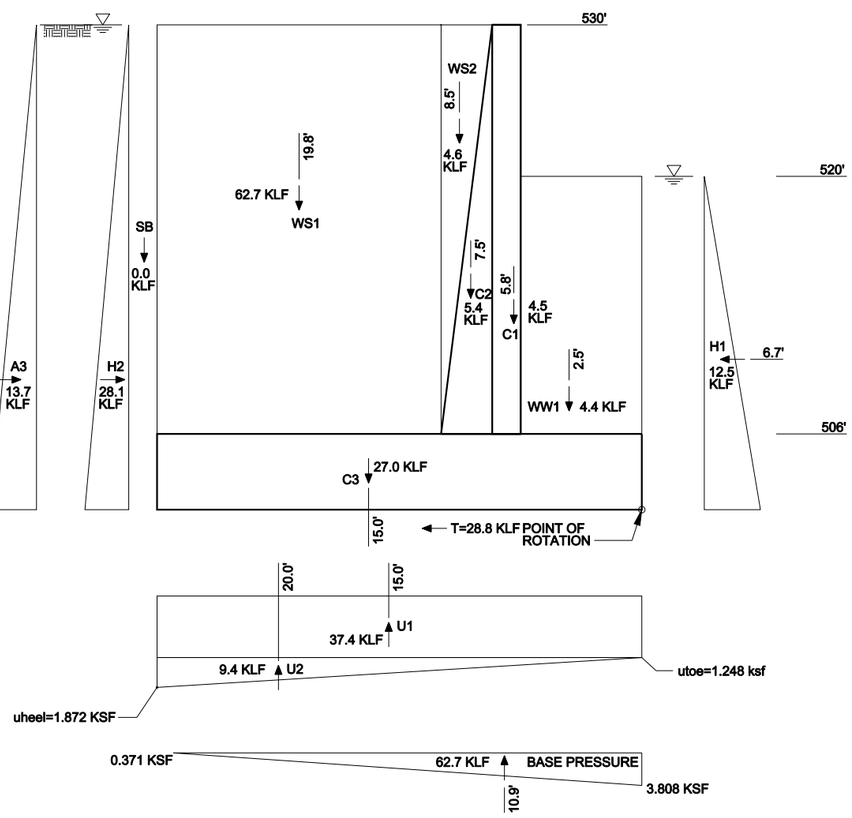
Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWW
Drawn by: BWW/JB
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
UPSTREAM LOCKWALL
STABILITY ANALYSIS

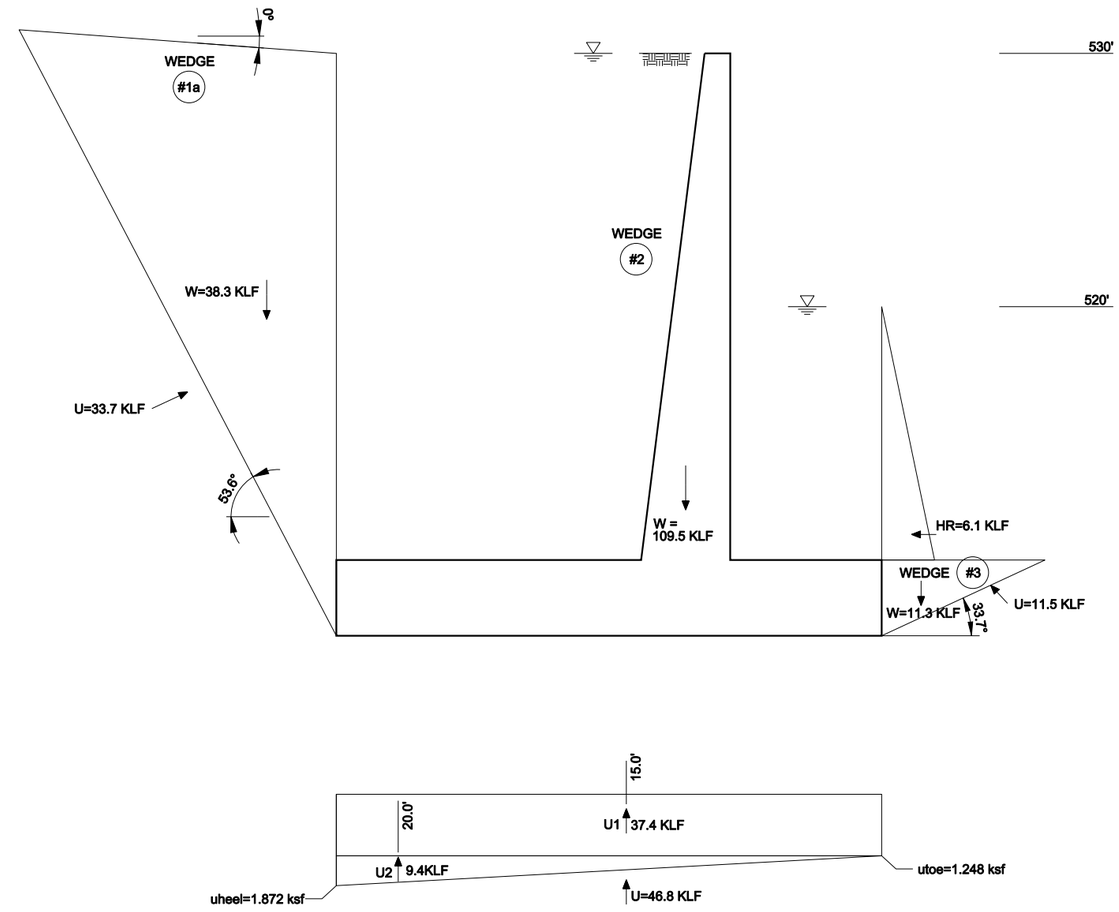
SHEET IDENTIFICATION

SS-12



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	520.0	28.8	0.0	62.7	4.11	100.0	0.371	3.808	11.37
1(b)	526.3	516.3	29.6	0.0	68.4	3.44	100.0	0.710	3.847	11.48
1(c)	516.3	516.3	22.8	0.0	78.3	1.42	100.0	1.866	3.352	13.96
1(d)	511.3	511.3	25.0	0.0	86.7	1.22	100.0	2.185	3.592	13.10
1(e)	506.0	506.0	26.4	0.0	95.2	0.94	100.0	2.575	3.773	12.57

SLIDING ANALYSIS SUMMARY									
LOAD CASE	WATER @ HEEL	WATER @ TOE	DRIVING WEDGE		STRUCTURAL		RESISTING		FS SLIDE
			Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	530.0	520.0	32	0.0	32	0.0	32	0.0	1.50
1(b)	526.3	516.3	32	0.0	32	0.0	32	0.0	1.56
1(c)	516.3	516.3	32	0.0	32	0.0	32	0.0	1.98
1(d)	511.3	511.3	32	0.0	32	0.0	32	0.0	1.99
1(e)	506.0	506.0	32	0.0	32	0.0	32	0.0	2.03

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	20.7	2228	31.7	2910
1(b)	20.9	2094	36.5	3591
1(c)	15.9	1619	48.7	5558
1(d)	17.2	1680	54.7	6318
1(e)	17.6	1690	61.2	7180

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUMDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS RANGING FROM THE RETAINED GRADE ELEVATION DOWN TO THE TOP OF THE CREST (ELEVATION 516.5'). ONLY THE MOST CRITICAL (WATER ELEVATION OVER HEEL AT 530.0-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF BRAD B. WATSON TEXAS NO. 80318 DATE: OCT 2007. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/JAW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
DOWNSTREAM LOCKWALL
STABILITY ANALYSIS

SHEET IDENTIFICATION

SS-13

00006-SSbs01.dgn
00006-SSbs11.dgn

MicroStation V8 User: mmt Office: FWCAD1
Workspace: Mwworkspace_cdm07244 Model: Default
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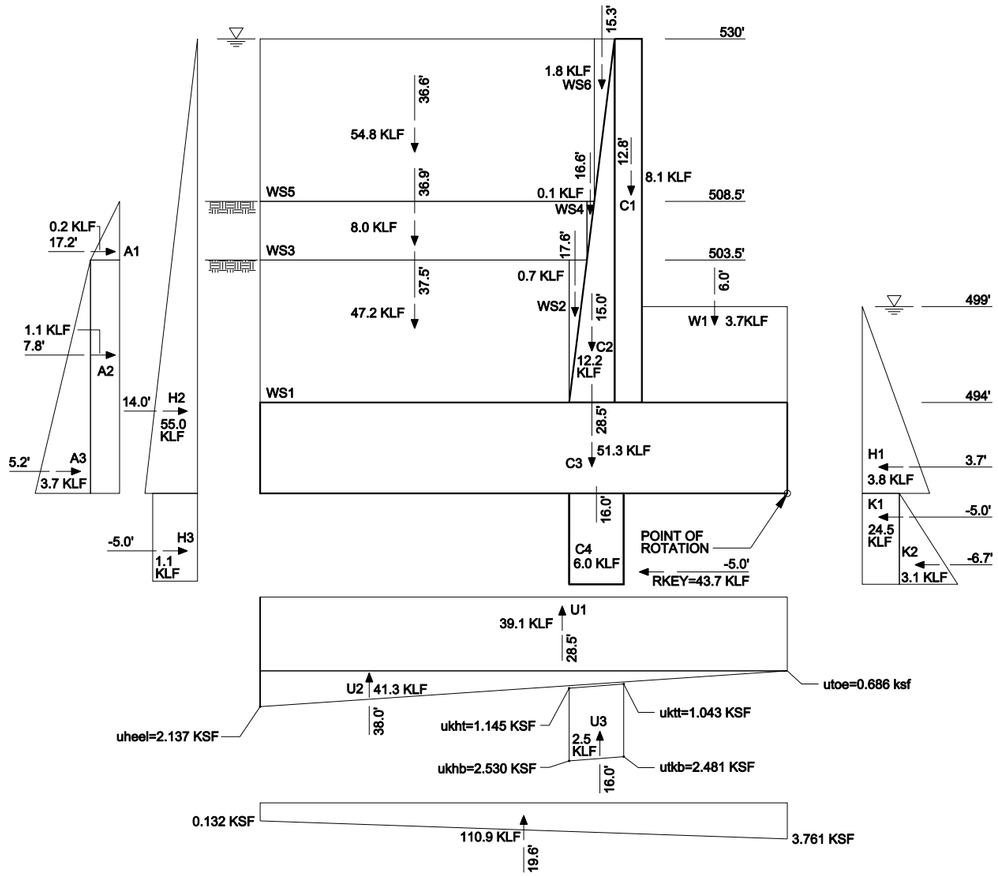
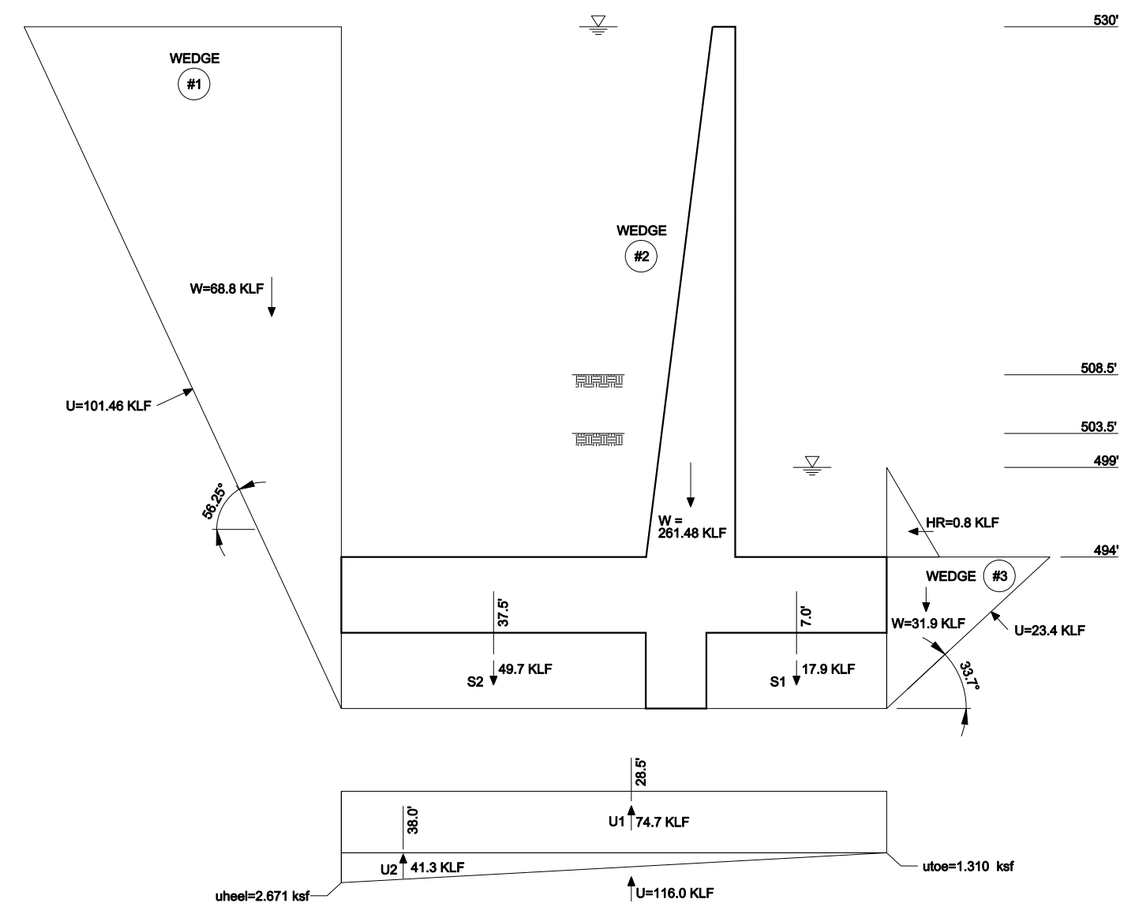


ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY									
LOAD CASE	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
							HEEL	TOE	FS
1(a)	515.0	9.0	0.0	87.4	8.74	100.0	0.122	2.943	9.65
1(b)	510.0	17.1	0.0	94.7	9.24	100.0	0.046	3.278	8.63
1(c)	505.0	23.5	0.0	102.1	9.25	100.0	0.047	3.535	8.00
1(d)	500.0	28.4	0.0	109.5	8.94	100.0	0.112	3.729	7.61
1(e)	499.0	29.2	0.0	110.9	8.86	100.0	0.132	3.761	7.55

SLIDING ANALYSIS SUMMARY								
LOAD CASE	WATER @ TOE	DRIVING WEDGE (#1)		STRUCTURAL WEDGE (#2)		RESISTING WEDGE (#3)		FS SLIDE
		Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	515.0	32	0.0	32	0.0	32	0.0	2.06
1(b)	510.0	32	0.0	32	0.0	32	0.0	1.78
1(c)	505.0	32	0.0	32	0.0	32	0.0	1.62
1(d)	500.0	32	0.0	32	0.0	32	0.0	1.52
1(e)	499.0	32	0.0	32	0.0	32	0.0	1.51

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	28.9	4782	42.4	6985
1(b)	34.7	5427	44.9	7145
1(c)	38.9	5772	48.4	7691
1(d)	41.6	5911	52.6	8552
1(e)	41.9	5923	53.6	8755

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE AT ELEVATION 530.0-FT. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE TOE RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 499.0-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DAM01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWW
Drawn by: BWW
Checked by: JCB
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

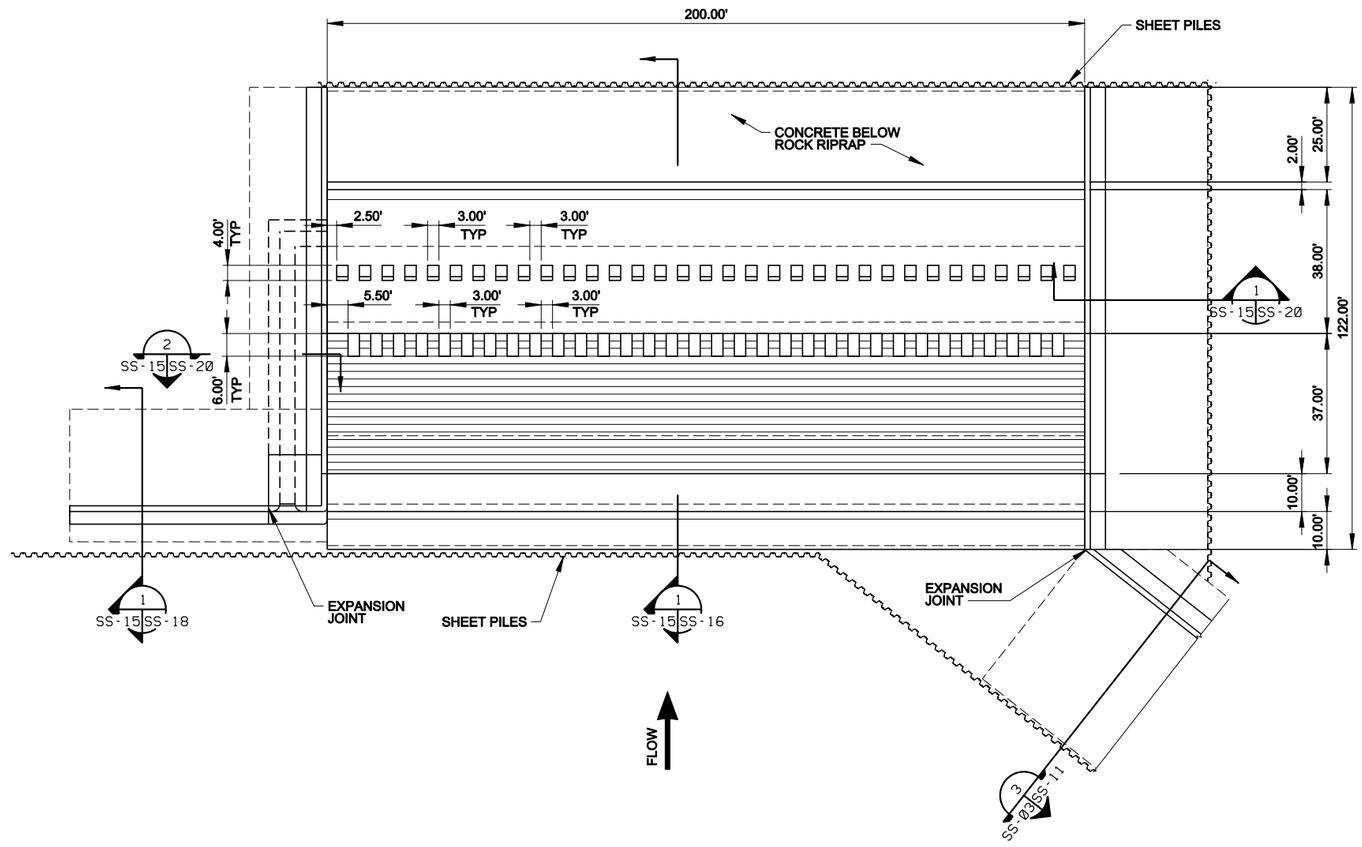
CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
SAMUELS AVENUE DAM
FLOODWALL
STABILITY ANALYSIS

SHEET IDENTIFICATION

SS-14



1 MARINE CREEK DAM PLAN
1" = 20'

NOT FOR CONSTRUCTION
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IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

0 10' 20' 40'
SCALE: 1" = 20'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-MAR-PL-PHDN.dgn
Set ID: BeID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BWMJAW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
PLAN
-

SHEET IDENTIFICATION
SS-15

ST-MAR-PL-BASE.DGN
07000-Marine Creek
00006-BSlist11.dgn

MicroStation V8 User: mmt Office: FWCAD1
Workspace: Marine Creek Workset: CDM
Plotter: JPredev_XWPDF_FinePDF-Monochrome
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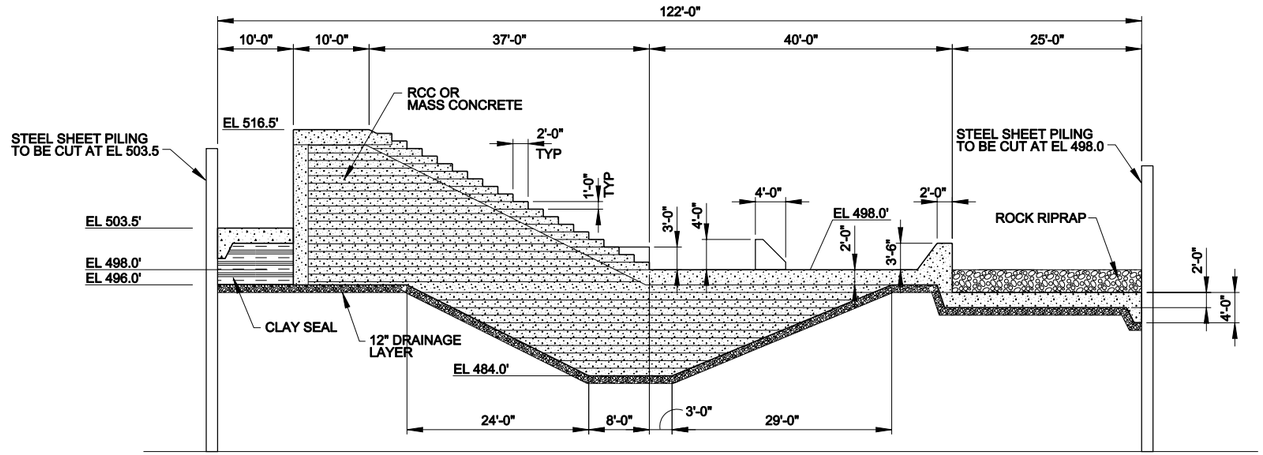
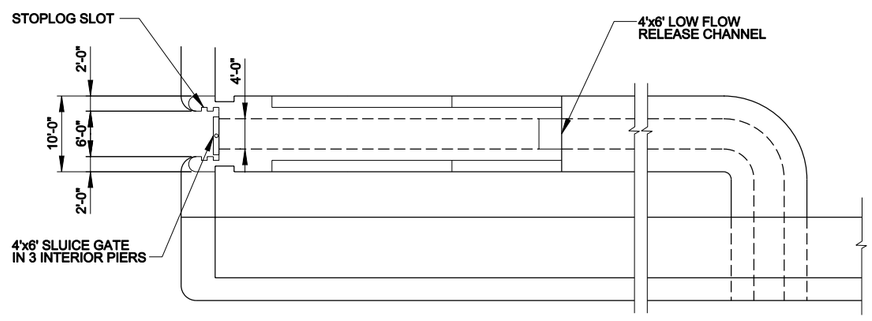


1 SECTION
SS-15 SS-16 1"=10'



2 PLAN OF LOW FLOW PIER
SS-15 SS-16 1"=5'

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0 5' 10'
SCALE: 1"= 5'

0 10' 20'
SCALE: 1"= 10'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-MAR-SC-CONC.dgn
Set ID: BeID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BWMJW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
SECTION
-

SHEET IDENTIFICATION
SS-16

ST-MAR-SC-BASE.dgn
ST-MAR-SC-CONC.dgn
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MicroStation V8 User: mmt Office: FWCAD1
ST-MAR-SC-CONC.dgn Level: SS-Sheets
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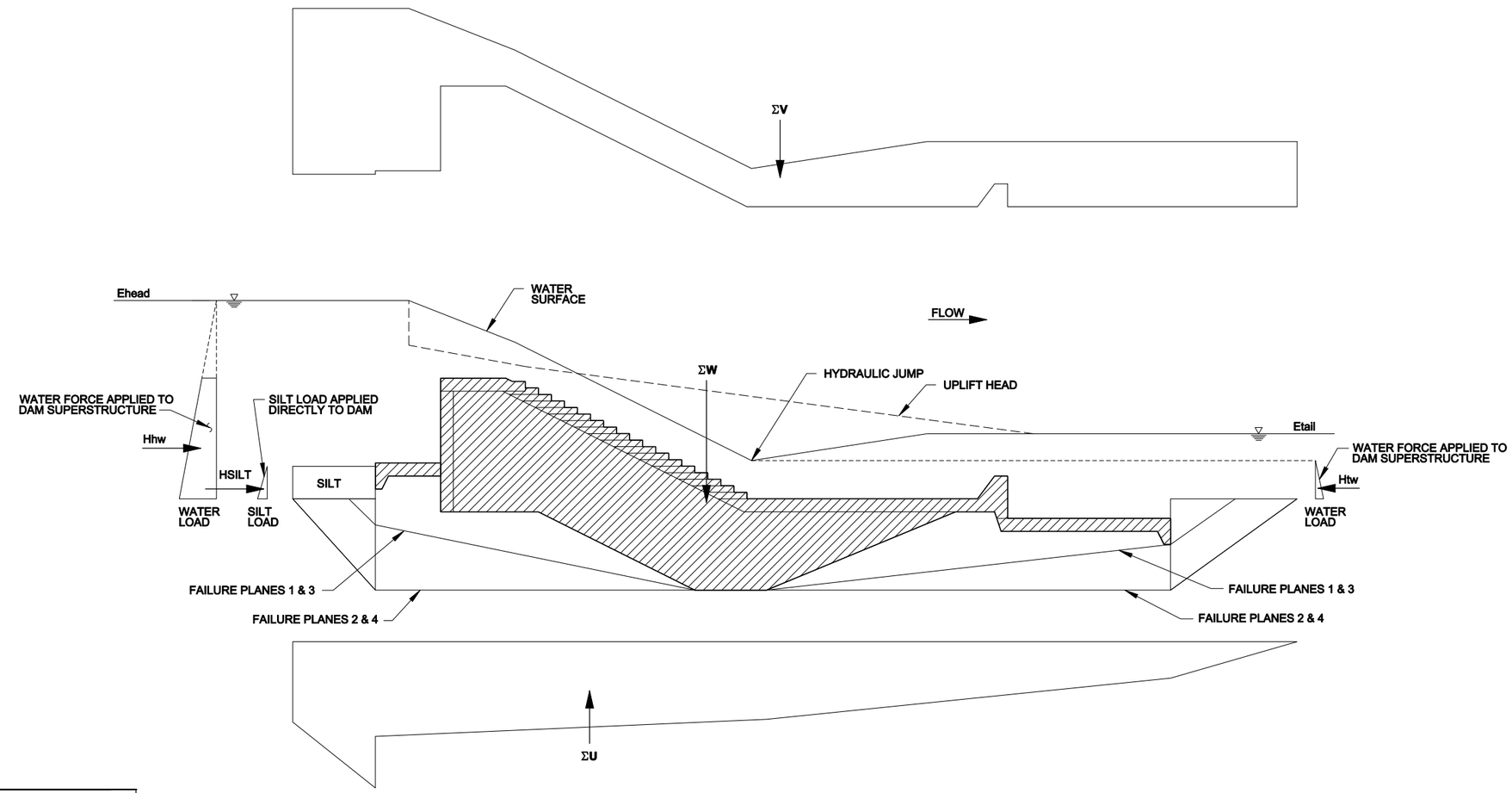

STABILITY ANALYSIS

1" = 10'

Marine Creek Dam Schedule											
					General Wedge Theory						
Load Case		E_{head} (ft-MSL)	E_{tail} (ft-MSL)	Req'd FS (Sliding)	Failure Plane	Summation of Vertical Loads (klf)			Summation of Lateral		FS
						ΣW	ΣV	ΣU	ΣH_L	ΣH_R	
1	Normal Pool	516.5	499	2	1	236.2	22.5	125.4	10.9	0.0	2.5
					2	288.6	34.6	168.2	10.9	0.0	4.1
					3	289.6	23.3	151.6	10.9	0.0	3.2
					4	341.6	35.6	194.5	10.9	0.0	5.0
2	10-yr	522.6	510	2	1	236.3	73.9	206.1	18.0	0.0	1.9
					2	288.3	88.5	253.1	18.0	0.0	3.0
					3	290.3	82.1	241.7	18.0	0.0	2.7
					4	341.9	97.1	288.8	18.0	0.0	4.0
3	50-yr	524.8	513	1.7	1	236.6	87.0	229.6	20.5	0.0	1.7
					2	287.9	102.4	278.0	20.5	0.0	2.6
					3	290.6	97.6	268.1	20.5	0.0	2.4
					4	342.0	113.2	316.4	20.5	0.0	3.5
4	100-yr	525.7	515	1.7	1	236.6	102.2	243.7	21.5	0.0	1.7
					2	287.9	118.3	292.8	21.5	0.0	2.7
					3	290.5	114.0	283.8	21.5	0.0	2.5
					4	341.8	130.4	333.0	21.5	0.0	3.5
5	500-yr	526.9	517	1.3	1	236.2	119.5	258.6	22.9	0.1	1.8
					2	288.2	136.2	308.8	22.9	0.1	2.8
					3	290.5	132.7	300.4	22.9	0.1	2.5
					4	342.0	149.5	350.4	22.9	0.1	3.5
6	Extreme	530	521	1.3	1	236.7	133.2	290.8	26.5	0.3	1.4
					2	287.4	150.1	342.3	26.5	0.3	2.1
					3	291.3	149.5	336.4	26.5	0.3	2.1
					4	342.0	167.0	388.1	26.5	0.3	3.0

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0 10' 20'

SCALE: 1" = 10'

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-MAR-SC-DAG01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/JAW
Checked by: -
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
STABILITY ANALYSIS
-

SHEET IDENTIFICATION

SS-17

MicroStation V8 User: mmt Office: FWCAD1
CDM07244 N:\st\00001_COE_SS-617xx59.dgn
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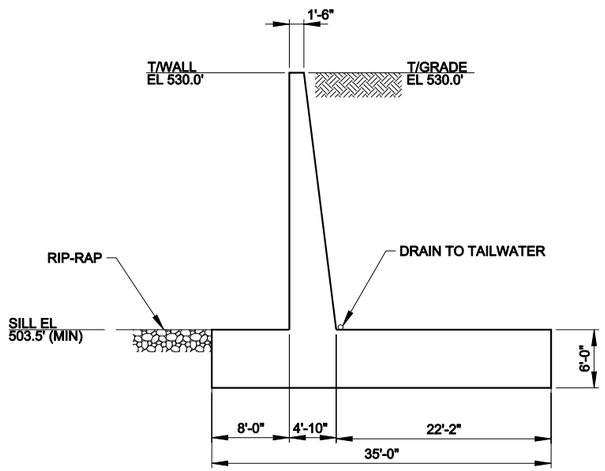
Plot Scale: 200.000 : 1 in. Model: Default
Date: Oct. 26, 2007 - 08:17:27 AM

ST-MAR-SC-BASE.dgn
0000G-BSxx01.dgn
0000G-BSxx11.dgn

Office:FWCAD1 CDM07244 Date:Oct. 26, 2007 - 08:17:27 AM User:mmt File: N:\st\00001_COE_SS-617xx59.dgn



1
TRAINING WALL
SS-15 SS-18 1/8"=1'-0"

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8' 0 8' 16'
1/8"=1'-0"

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DIA001.dgn
Set ID.: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/JAW
Checked by: ...
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM
Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK
LEFT TRAINING WALL
DIMENSIONS

SHEET IDENTIFICATION
SS-18

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Date: Oct. 26, 2007 - 08:25:24 AM
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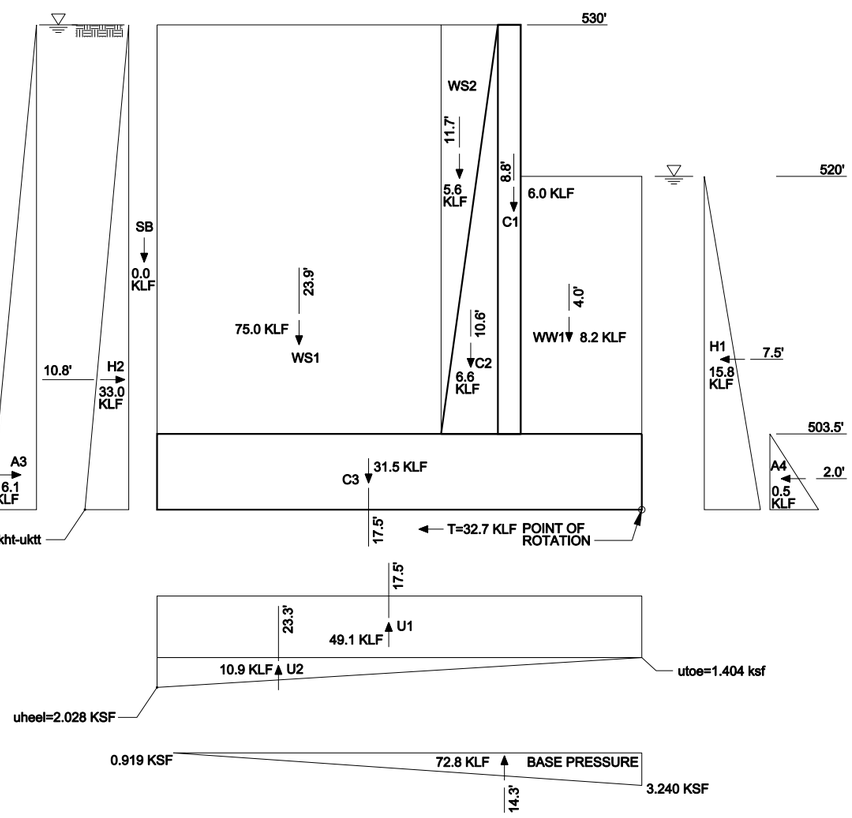
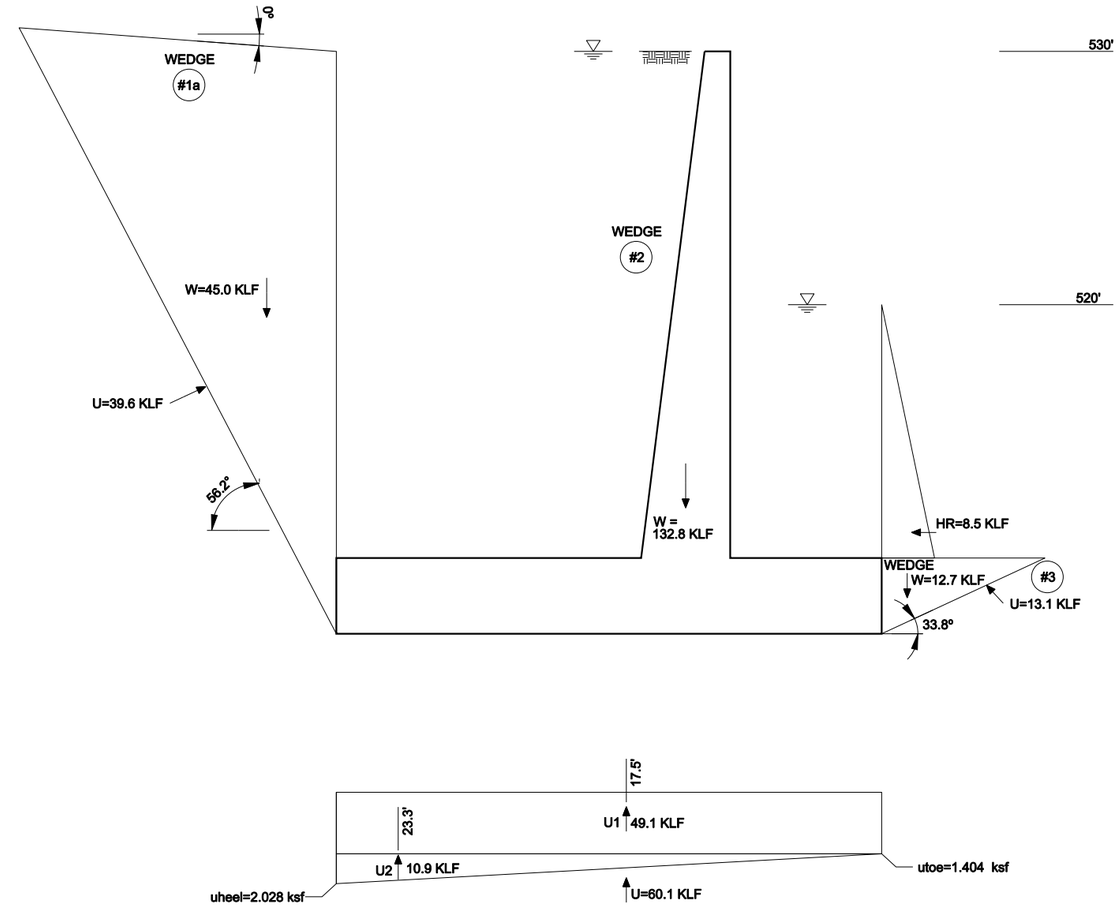


ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE



SLIDING STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	520.0	32.7	0.0	72.8	3.25	100.0	0.919	3.240	13.73
1(b)	523.4	513.4	34.5	0.0	84.4	2.10	100.0	1.544	3.276	13.98
1(c)	516.8	506.8	35.0	0.0	95.9	1.14	100.0	2.205	3.246	14.31
1(d)	510.1	503.5	33.1	0.0	105.5	0.40	100.0	2.806	3.221	14.81
1(e)	503.5	503.5	31.2	0.0	113.1	-0.10	100.0	3.288	3.174	15.14

SLIDING ANALYSIS SUMMARY									
LOAD CASE	WATER @ HEEL	WATER @ TOE	DRIVING WEDGE		STRUCTURAL		RESISTING		FS SLIDE
			Φ	C (KSF)	Φ	C (KSF)	Φ	C (KSF)	
1(a)	530.0	520.0	32	0.0	32	0.0	32	0.0	1.51
1(b)	523.4	513.4	32	0.0	32	0.0	32	0.0	1.61
1(c)	516.8	506.8	32	0.0	32	0.0	32	0.0	1.73
1(d)	510.1	503.5	32	0.0	32	0.0	32	0.0	1.89
1(e)	503.5	503.5	32	0.0	32	0.0	32	0.0	2.03

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	24.1	2899	36.7	4164
1(b)	24.7	2654	46.4	5643
1(c)	23.9	2418	56.5	7183
1(d)	22.2	2293	65.2	8547
1(e)	21.5	2274	72.1	9640

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE HEEL RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION 530.0-FT) CASE, WITH RESPECT TO SLIDING, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

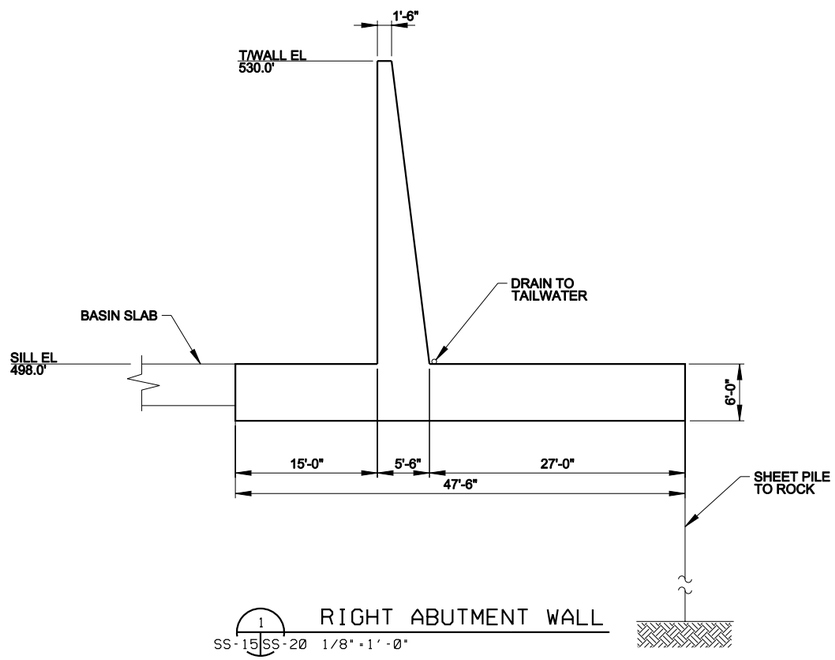
Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BWMUW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM
Presser and Nicholas

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
LEFT TRAINING WALL
STABILITY ANALYSIS

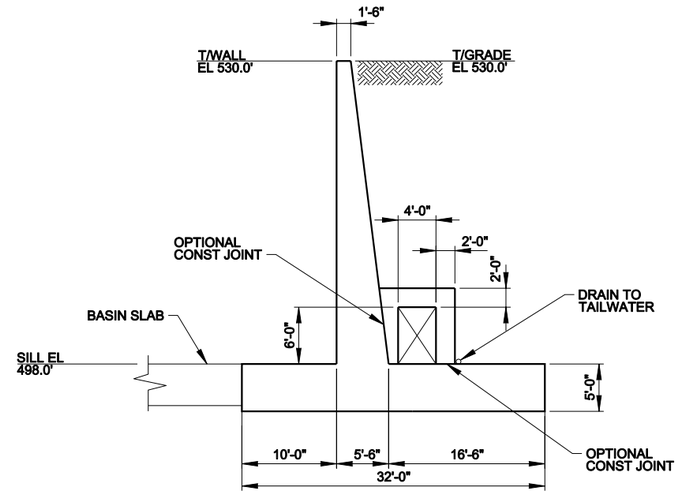
SHEET IDENTIFICATION

SS-19



1 RIGHT ABUTMENT WALL

SS-15 SS-20 1/8"=1'-0"



2 LEFT ABUTMENT WALL

SS-15 SS-20 1/8"=1'-0"

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8' 0 8' 16'

1/8"=1'-0"

US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SO-DAG01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWM
Drawn by: BWM/JAW
Checked by:
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK
ABUTMENT WALLS
DIMENSIONS

SHEET IDENTIFICATION

SS-20

MicroStation V8 User: mmt Office: FWCAD1
CDM07244 Workspace: cdot_FWCAD1
Plotter: JPhoto_XMPPS_PlanPDF-Mono-Half
Plot Scale: 180.000 = 1 in. Model: Default
Date: Oct. 26, 2007 - 08:21:01 AM

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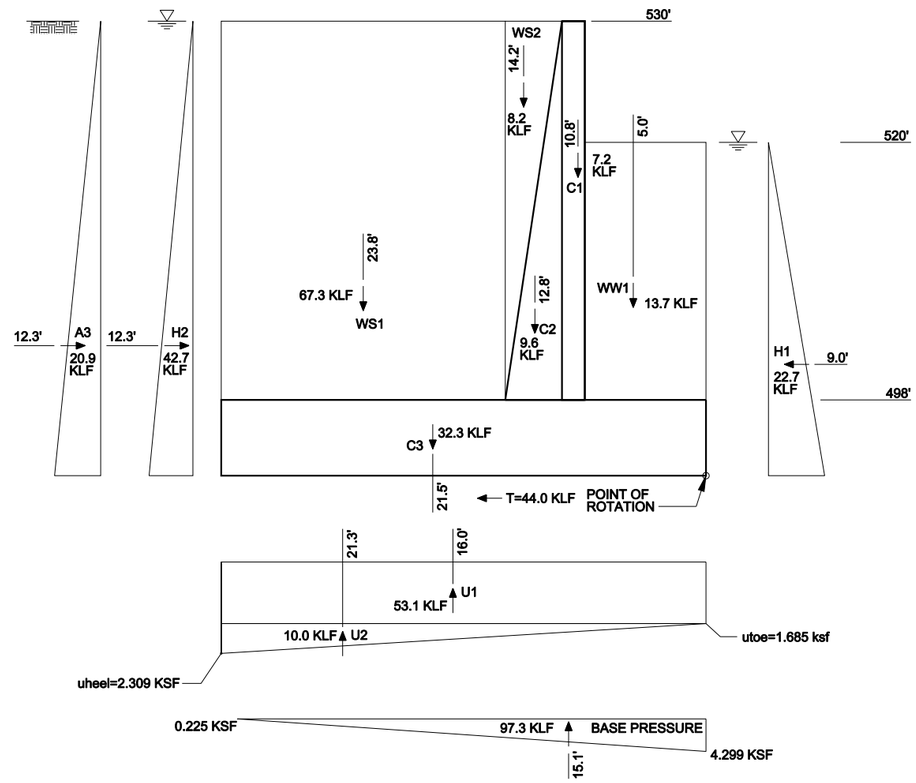
00000-BBset11.dgn

Office:FWCAD1 CDM07244 Date:Oct. 26, 2007 - 08:21:01 AM User:mmt File: N:\st\00001_COE_SS-620xx62.dgn



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	530.0	520.0	40.9	0.0	66.1	5.23	100.0	0.040	4.092	5.55
1(b)	522.0	512.0	44.0	0.0	77.5	3.64	100.0	0.767	4.076	5.69
1(c)	514.0	504.0	45.1	0.0	88.9	2.28	100.0	1.592	3.962	5.97
1(d)	506.0	498.0	43.7	0.0	99.4	1.24	100.0	2.388	3.828	6.26
1(e)	498.0	498.0	41.4	0.0	107.8	0.62	100.0	2.977	3.759	6.43

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	VMAX (K/FT)	MMAX (K-IN/FT)	VMAX (K/FT)	MMAX (K-IN/FT)
1(a)	32.5	4763	34.6	2202
1(b)	34.3	4543	35.6	2239
1(c)	34.2	4239	36.4	3266
1(d)	32.3	4038	45.5	4305
1(e)	31.3	4005	52.5	5082

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

NOTE:

THE DAM AND BASIN ARE ASSUMED TO BE CAPABLE OF RESISTING THE NET SLIDING FORCE ON THE WALL.

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE HEEL RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION OVER HEEL AT 530.0-FT) CASE, WITH RESPECT TO ROTATION, IS PRESENTED IN GRAPHICAL FORM.

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

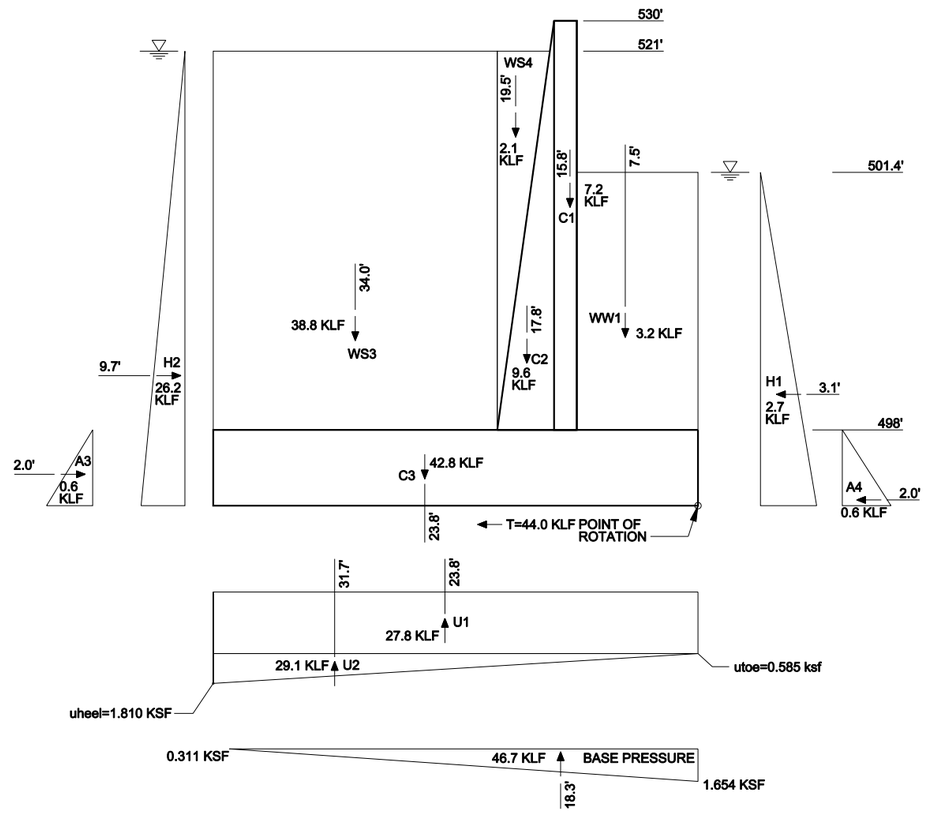
Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetD
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BWW
Drawn by:
Checked by: BWW/JB
Responsible P.E.: BRAD B. WATSON
License Number: 80318
License State: TEXAS

CDM
Presser and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
LEFT ABUTMENT WALL
STABILITY ANALYSIS

SHEET IDENTIFICATION

SS-21



ROTATIONAL STABILITY ANALYSIS

NOT TO SCALE

ROTATIONAL ANALYSIS SUMMARY										
LOAD CASE	WATER @ HEEL	WATER @ TOE	FX TOTAL (KLF)	FY TOTAL (KLF)	FZ TOTAL (KLF)	e (FT)	BASE IN COMPRESSION (%)	BEARING PRESSURE (KSF)		
								HEEL	TOE	FS
1(a)	521.0	501.4	29.0	0.0	46.7	5.41	100.0	0.311	1.654	3.20

SHEAR AND MOMENT ANALYSIS				
LOAD CASE	WALL		FOOTING	
	V_{MAX} (K/FT)	M_{MAX} (K-IN/FT)	V_{MAX} (K/FT)	M_{MAX} (K-IN/FT)
1(a)	16.2	1514	21.6	2472

LEGEND:

FX = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL X DIRECTION (POSITIVE TOWARD CHANNEL) CONSIDERING ANY UPLIFT EFFECTS BUT WITHOUT SHEAR KEY RESISTANCE.

FY = SUM OF ALL HORIZONTAL FORCES IN THE GLOBAL Y DIRECTION CONSIDERING ANY UPLIFT EFFECTS

FZ = SUM OF ALL VERTICAL FORCES IN THE GLOBAL Z DIRECTION (POSITIVE DOWNWARD) CONSIDERING ANY UPLIFT EFFECTS

e = DISTANCE BETWEEN RESULTANT AND CENTROID OF BASE CONSIDERING ANY UPLIFT EFFECTS

NOTE:

THE DAM AND BASIN ARE ASSUMED TO BE CAPABLE OF RESISTING THE NET SLIDING FORCE ON THE WALL.

DESIGN PARAMETERS:

WATER = 0.0625 KCF
CONCRETE = 0.150 KCF
WIND = NOT CONSIDERED
SEISMIC = NOT CONSIDERED

WALL LOADS DUE TO SOIL:
ABOVE WATER TABLE = 0.065
KSF/FT BELOW WATER TABLE = 0.0325 KSF/FT

LOADING CONDITIONS:

I EXTREME INUNDATION FOLLOWED BY A RAPID DRAW DOWN EVENT. THE HEIGHT OF RETAINED WATER WAS ASSUMED TO BE 10-FT ABOVE THE WATER LEVEL AT THE TOE. THE ANALYSIS WAS RUN FOR A SERIES OF WATER ELEVATIONS OVER THE HEEL RANGING FROM THE TOP OF WALL ELEVATION DOWN TO THE TOP OF FOOTING ELEVATION. ONLY THE MOST CRITICAL (WATER ELEVATION OVER HEEL AT 522.0-FT) CASE, WITH RESPECT TO ROTATION, IS PRESENTED IN GRAPHICAL FORM.

NOT FOR CONSTRUCTION

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US Army Corps of Engineers
Fort Worth District

Symbol	Description	Date	Appr.

Design file: ST-SAM-SC-DAG01.dgn
Set ID: SetID
Size: ANSI D
Plot date: SEPTEMBER 2007
Designed by: BBW
Drawn by: BBW/JAW
Checked by: -
Responsible P.E.: BRAD B. WATSON
License Number: 80318
LicenseState: TEXAS

CDM

Freese and Nichols

FORT WORTH CENTRAL CITY
PRELIMINARY DESIGN - SUPPLEMENT
MARINE CREEK DAM
RIGHT ABUTMENT WALL
STABILITY ANALYSIS

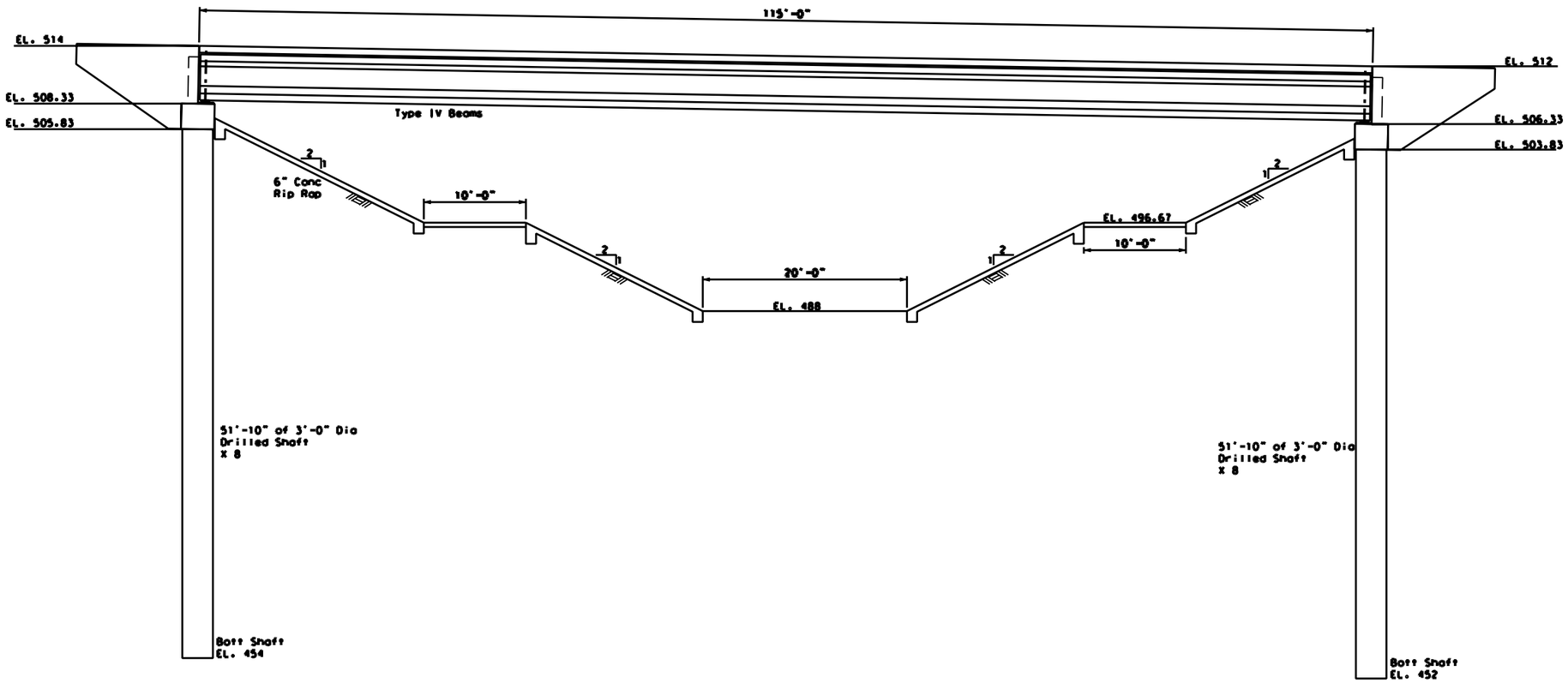
SHEET IDENTIFICATION

SS-22

MicroStation V8 User: mmt Office: FWCAD1
CDM07244 N:\st\00001_COE_SS-622xx64.dgn
Plotter: J:\Plots\XAMPDF_FilePDF-Monochrome.pdf
Plot Scale: 100.000 : 1 in. Model: Default
Date: Oct. 25, 2007 - 04:16:09 PM

00000-SSxx01.dgn
00000-SSxx11.dgn

Office:FWCAD1 CDM07244 Date:Oct. 25, 2007 - 04:16:09 PM User:mmt File: N:\st\00001_COE_SS-622xx64.dgn



NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

1" - 5'

SYM	B.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: H. LEY
DRAWN BY: H. LEY
REVIEWED BY: W. SHANER

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

BEACH STREET
ELEVATION

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

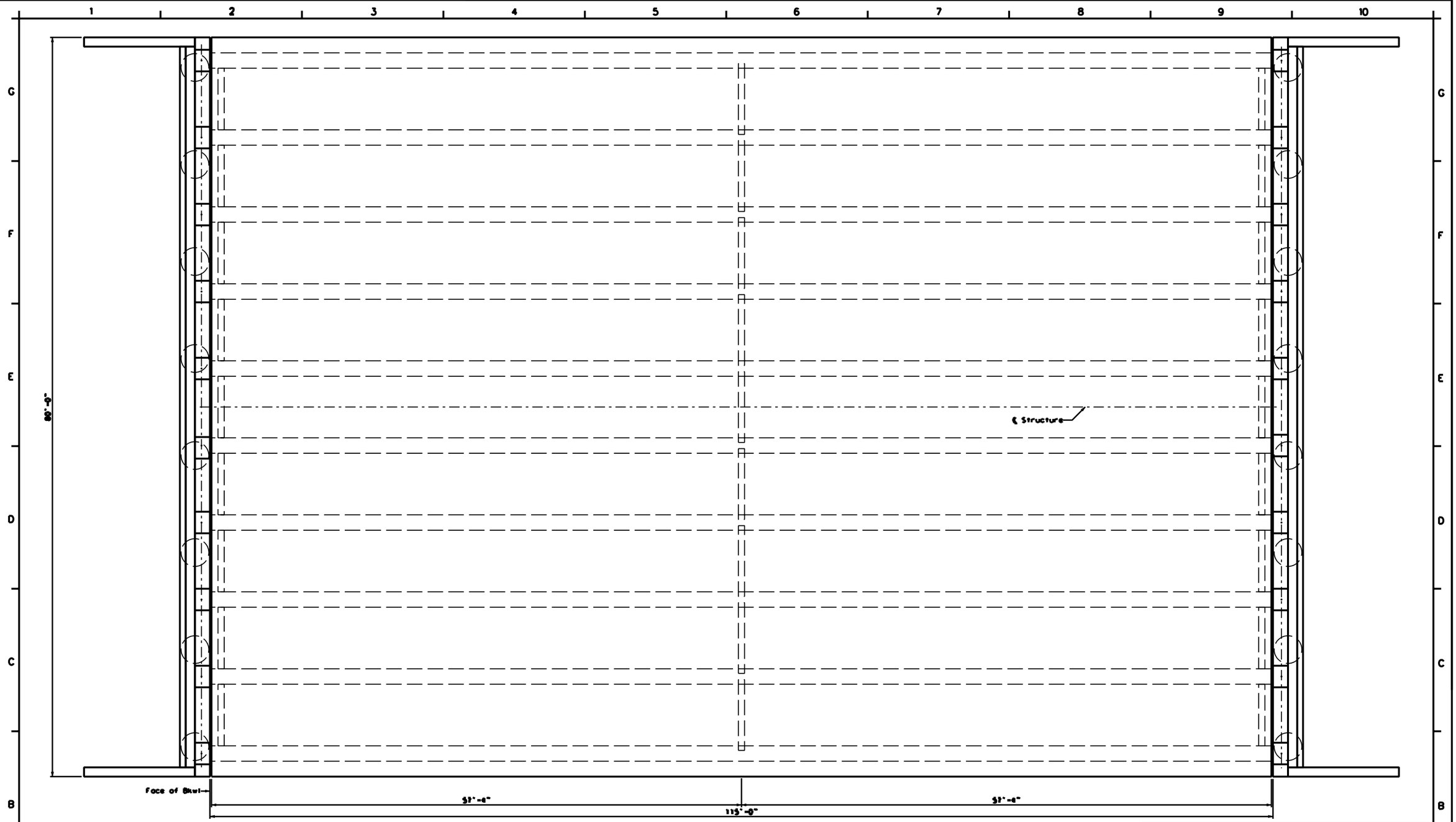
SOL. NO.
DATED:
CONTR. NO.
PLATE
DRAWING NUMBER RS-01
SHEET NO. 51 OF

REFERENCE FILE NAME
REFERENCE FILE DESCRIPTION

CADD FILE NAME: elev.dgn

CONTR. NO.

RS-01.dgn 10/29/2007 4:53:14 PM



NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

1" = 4'

REFERENCE FILE NAME	REFERENCE FILE DESCRIPTION

SYM	D.D. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: R. LEY
DRAWN BY: R. LEY
REVIEWED BY: W. SHANKS

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

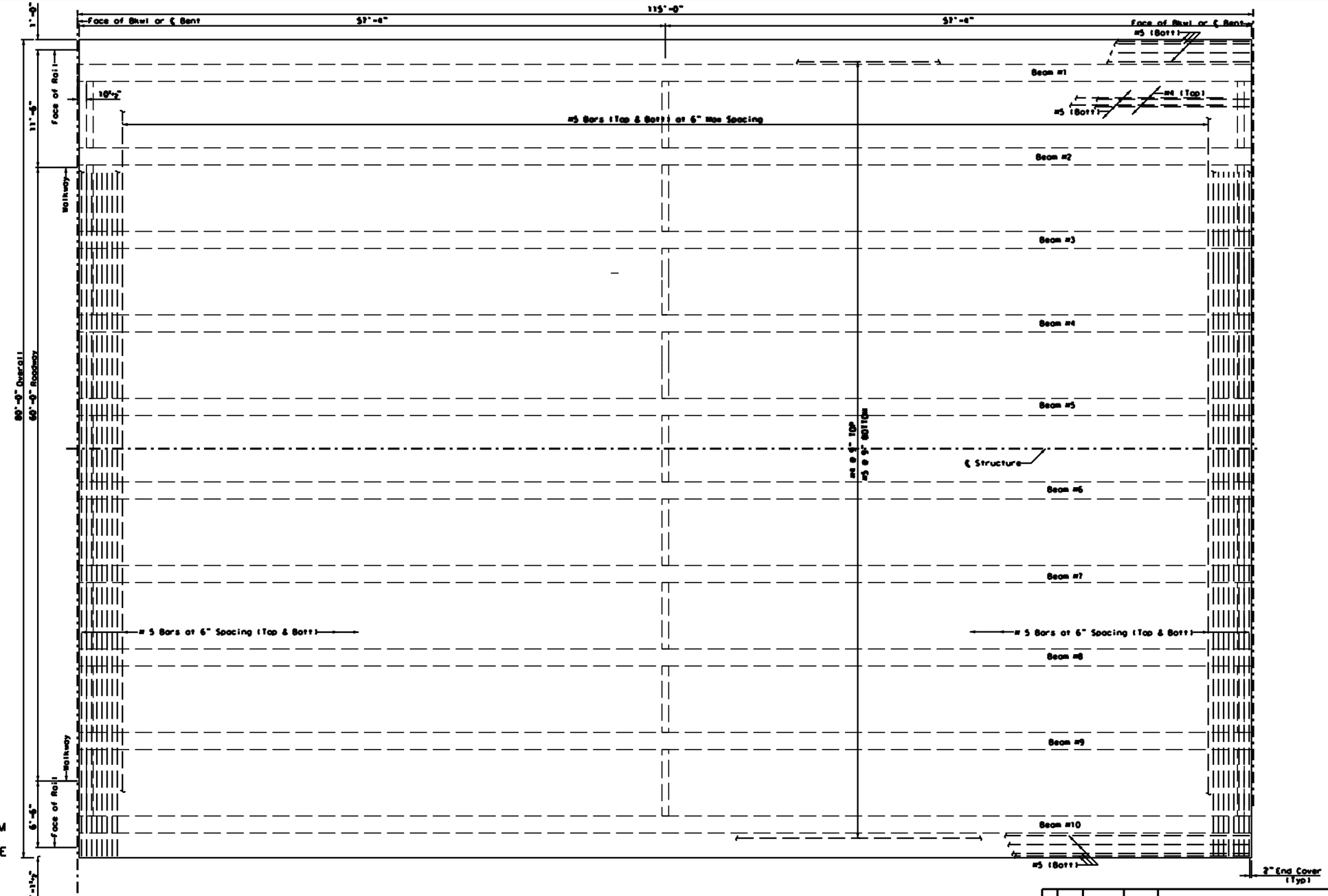
BEACH STREET
PLAN

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

SOL. NO.
DATED:
CONTR. NO.
DRAWING NUMBER: RS-02
SHEET NO. 52 OF
PLATE
CONTR. NO.

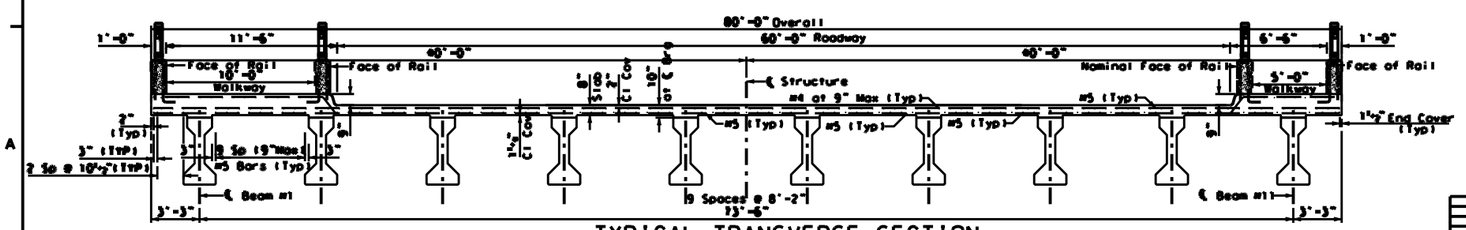
CADD FILE NAME: plan.dgn

RS-02.dgn 10/29/2007 4:53:27 PM



NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED: "RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)" DRAWING IS NOT TO SCALE.



TYPICAL TRANSVERSE SECTION

GENERAL NOTES:

All reinforcing shall be Grade 60.
Concrete strength f'c = 4,000 psi.
Bar laps, where required, shall be as follows:
#4 = 1'-5"
#5 = 1'-9"

1"=4'

SYM	B.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: H. LEY
DRAWN BY: H. LEY
REVIEWED BY: W. SHAWER

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

BEACH STREET
SLAB

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

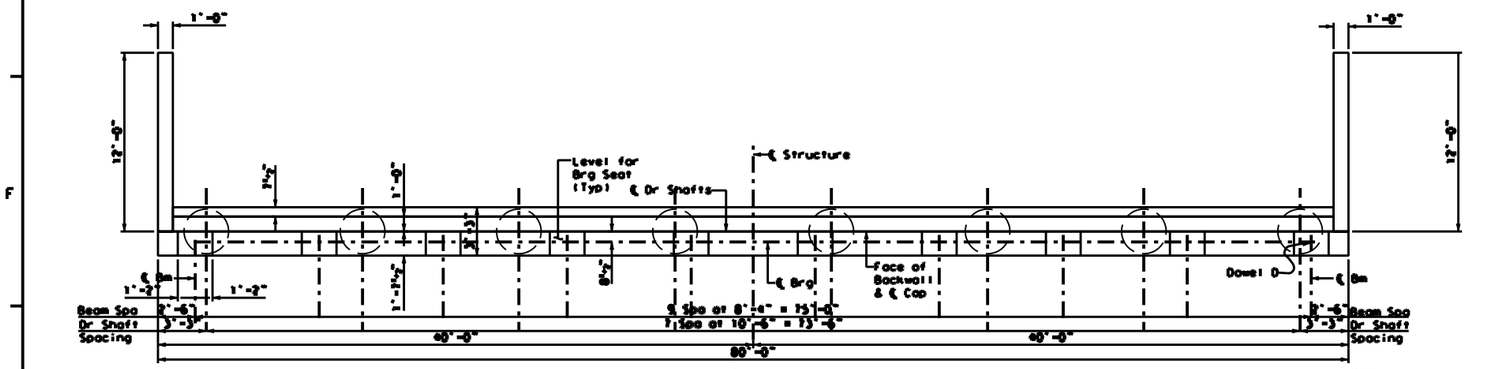
SOL. NO.
DATED:
CONTR. NO.
PLATE
DRAWING NUMBER RS-03
SHEET NO. 53 OF

REFERENCE FILE NAME
REFERENCE FILE DESCRIPTION

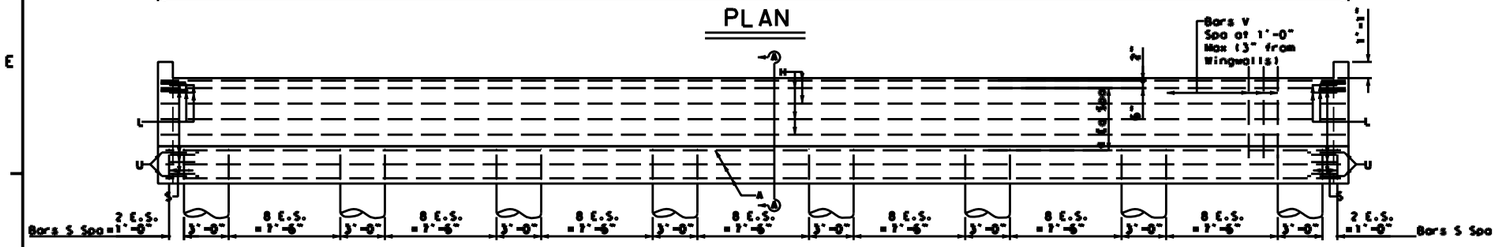
CADD FILE NAME: slab.dgn

CONTR. NO.

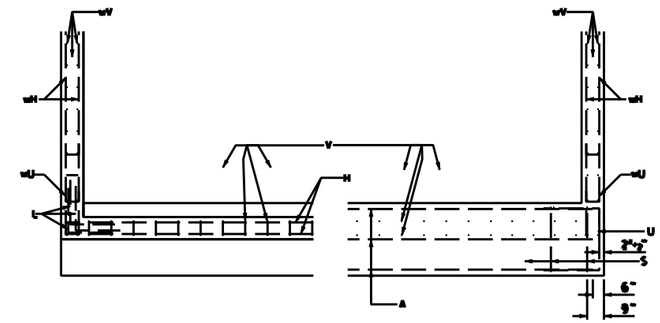
RS-03.dgn 10/29/2007 4:53:38 PM



PLAN



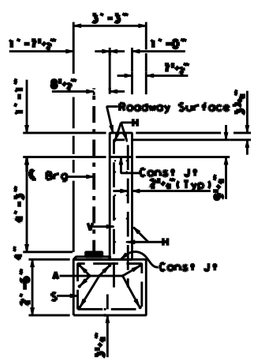
ELEVATION



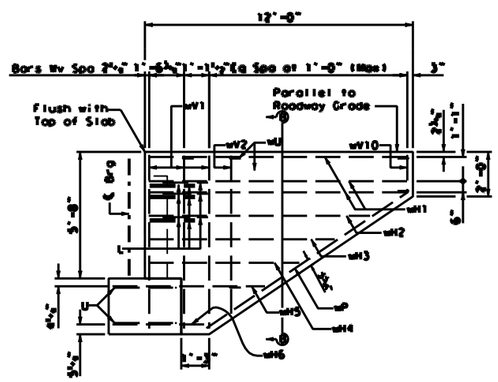
BACKWALL CAP

CORNER DETAILS

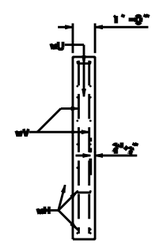
GENERAL NOTES:
Concrete strength f'c = 3,600 psi
All cap and wall reinforcing shall be Grade 60



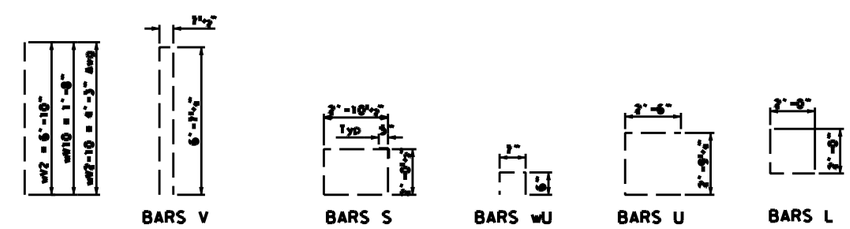
SECTION A-A



WINGWALL ELEVATION



SECTION B-B



NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

SCALE: 1" = 4'

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: H. LEY
DRAWN BY: H. LEY
REVIEWED BY: W. SHANER

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

BEACH STREET
ABUTMENT

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

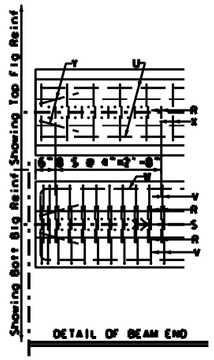
SOL. NO. | DATED:
CONTR. NO. | PLATE
DRAWING NUMBER RS-04 | SHEET NO. 54 OF

REFERENCE FILE NAME | REFERENCE FILE DESCRIPTION

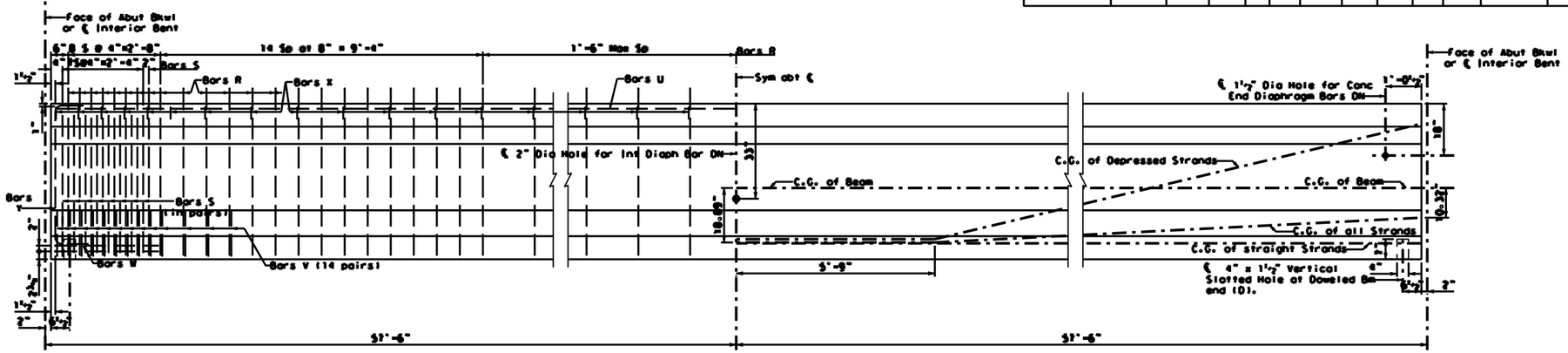
CADD FILE NAME: abut.dgn

CONTR. NO.

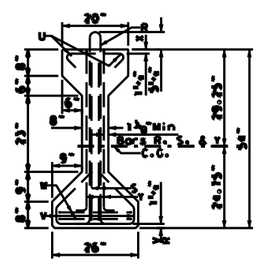
RS-04.dgn 10/29/2007 4:53:48 PM



	SPAN LENGTH (ft)	BEAM TYPE		PRESTRESSING STRANDS							CONCRETE	
				TOTAL					DEPRESSED		RELEASE STRGTH f'ci (psi)	MINIMUM 28 DAY COMP STRGTH f'c (psi)
				NO.	SIZE (in)	STRGTH f's (ksi)	"e" ℄ (in)	"e" END (in)	NO.	TO (in)		
Type C Beams 60' Rdwy 8" Slab 8'-3" Bm Spa	115	IV		56	1/2	270K	18.89	10.32	12	52.0	6505	7065



ELEVATION OF BEAM

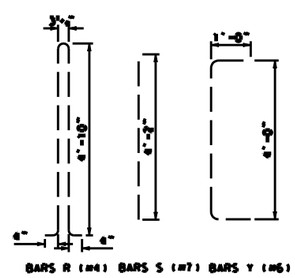


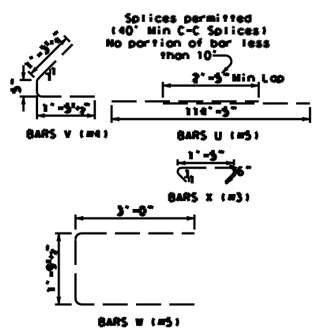
TYPE IV BEAM

AREA 788.4 in²

I 260,403 in⁴

Wt 821 Lb./LF





GENERAL NOTES:

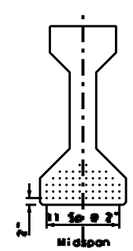
Designed in accordance with current AASHTO Standard Specifications.

All concrete shall be Class H. All reinforcing bars shall be Grade 60.

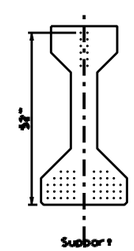
Bottom corners of all beam flanges and outside corners of exterior beam ends shall be chamfered ¾" or rounded to a 1½" radius.

Prestress losses for the designed beam have been calculated for a relative humidity of 60 percent.

Strands for the designed beam shall be ½" 270 ksi low relaxation strands pretensioned to 31.0 k each.



TYPE IV BM



TYPE IV BM

NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

1" = 1½"

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

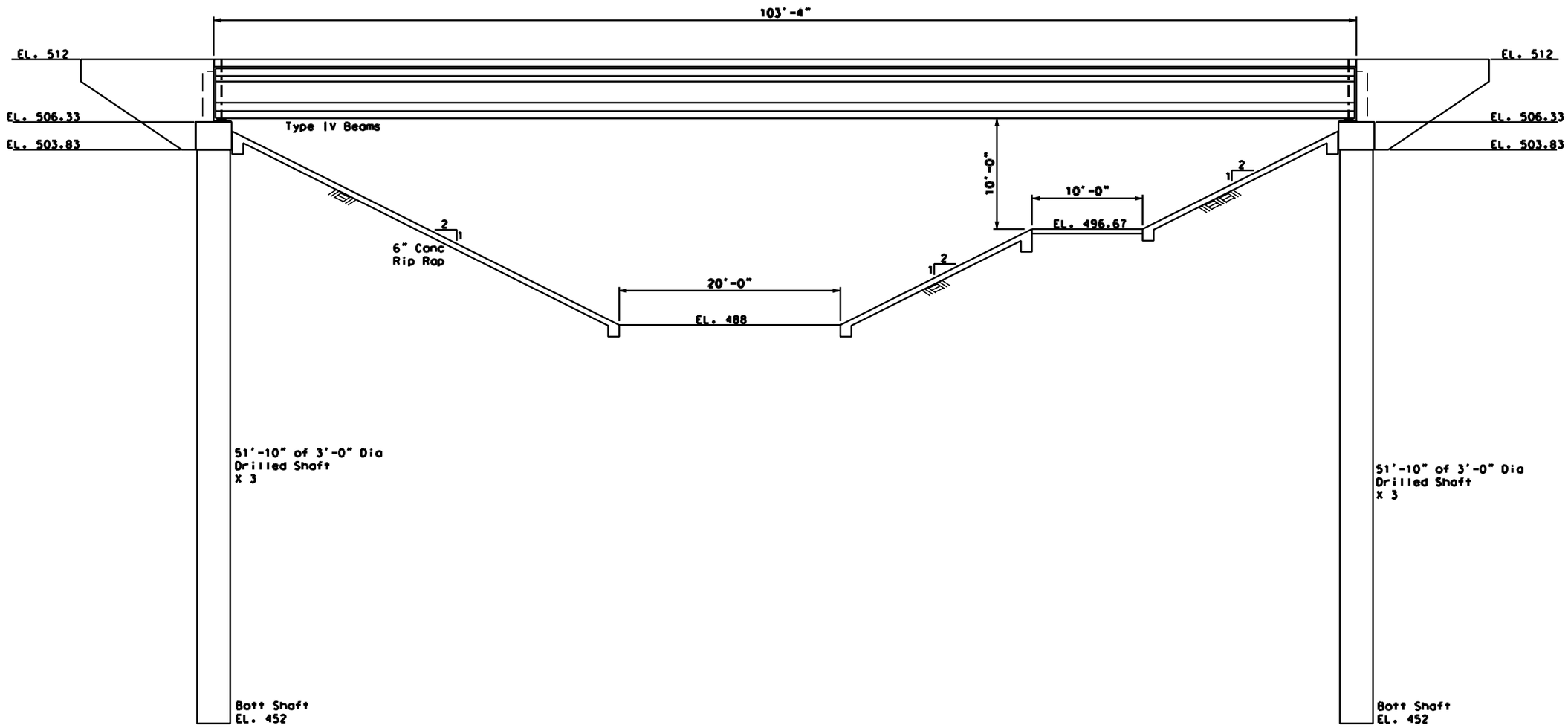
TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

BEACH STREET
I-BEAM

WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

SOL. NO.
DATE:
CONTR. NO.
DRAWING NUMBER RS-05
SHEET NO. 55 OF
PLATE

CADD FILE NAME: beam.dgn



NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

1" = 4'

SYM	B.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: H. LEY
DRAWN BY: H. LEY
REVIEWED BY: W. SHAWER

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

PARK ROAD
ELEVATION

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

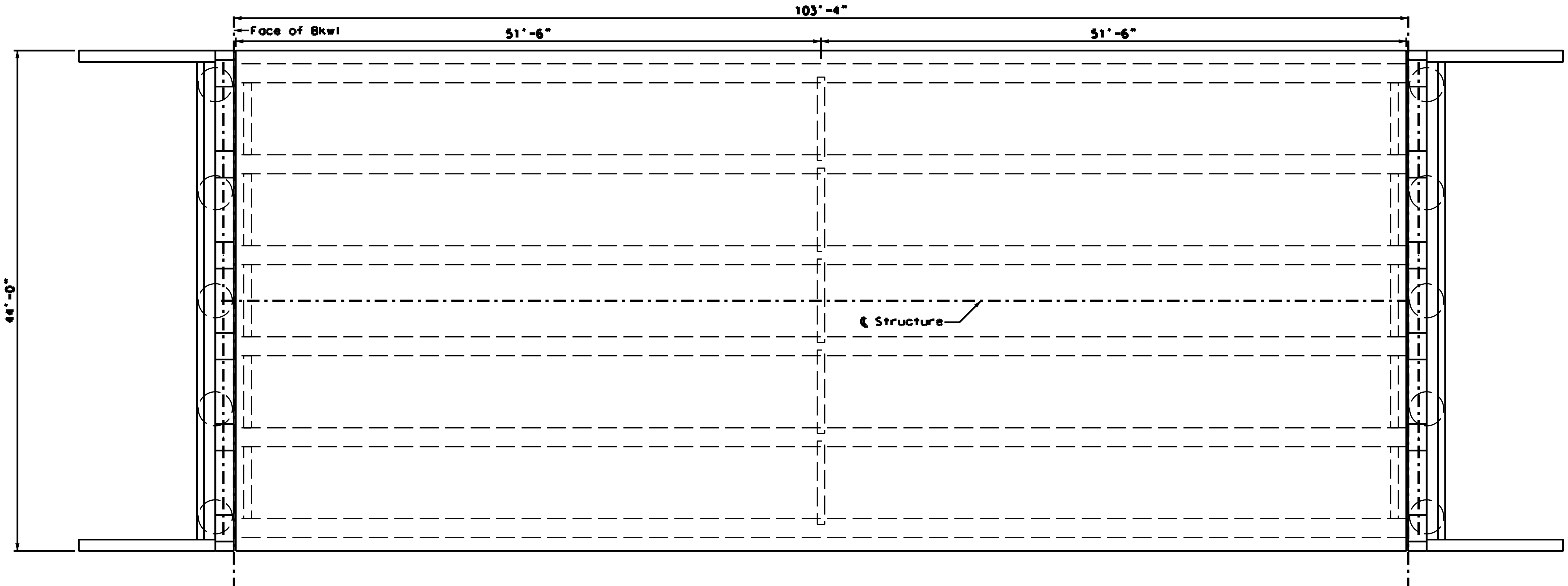
SOL. NO. | DATED:
CONTR. NO. | PLATE
DRAWING NUMBER RS-06 | SHEET NO. 511 OF

REFERENCE FILE NAME | REFERENCE FILE DESCRIPTION

CADD FILE NAME: elev.dgn

CONTR. NO.

RS-06.dgn 10/29/2007 4:54:13 PM



PLAN

1" = 4'

NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: H. LEY
DRAWN BY: H. LEY
REVIEWED BY: W. SHANER

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

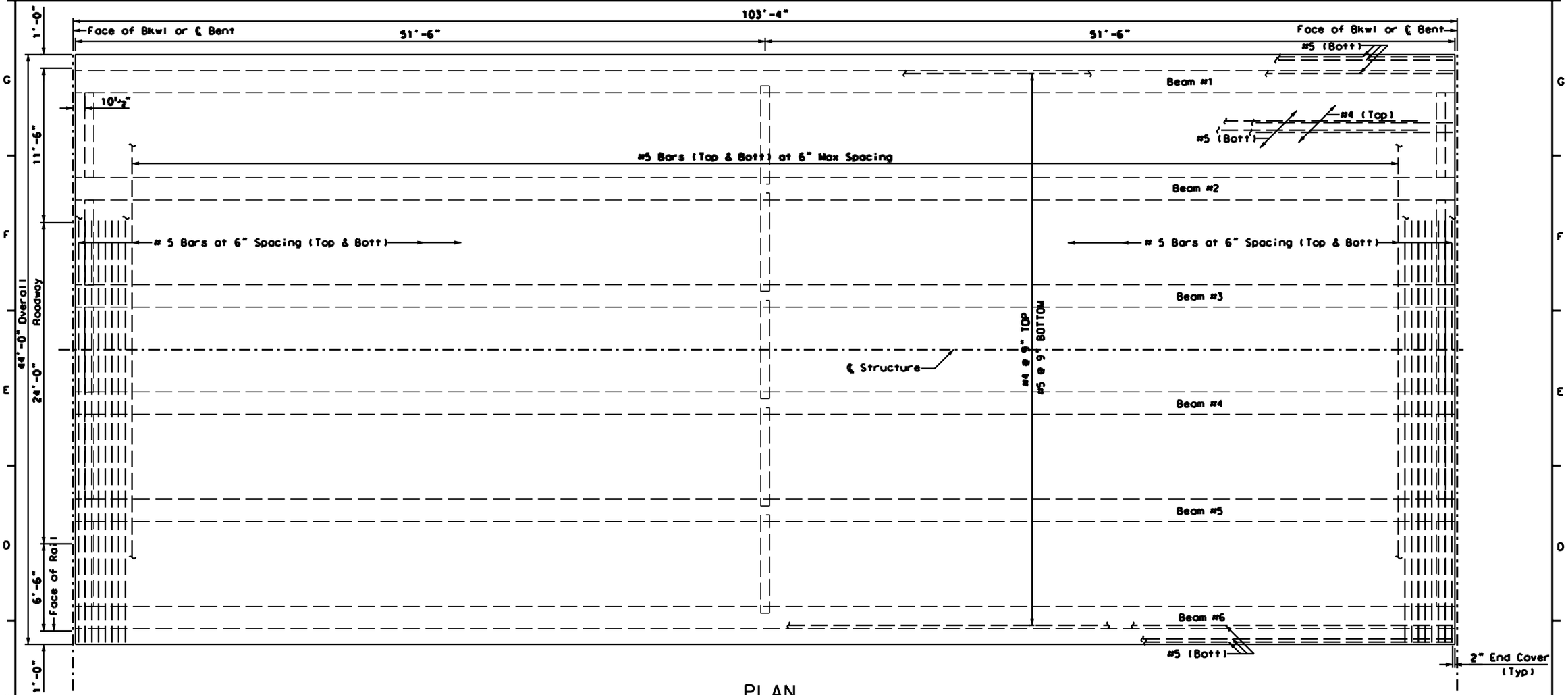
PARK ROAD
PLAN

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

SOL. NO. | DATED:
CONTR. NO. | PLATE
DRAWING NUMBER: RS-07 | SHEET NO.: 512 OF

CADD FILE NAME: plan.dgn

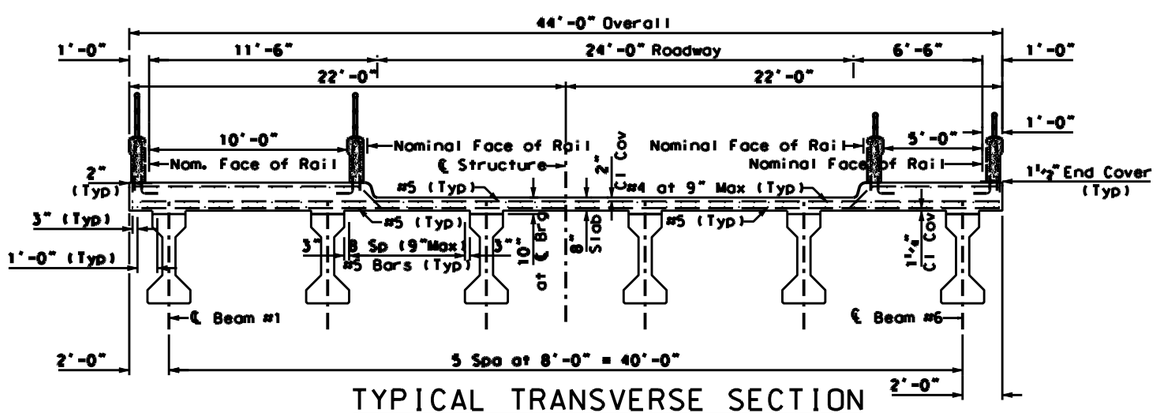
RS-07.dgn 10/29/2007 4:54:23 PM



PLAN

NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.



TYPICAL TRANSVERSE SECTION

GENERAL NOTES:

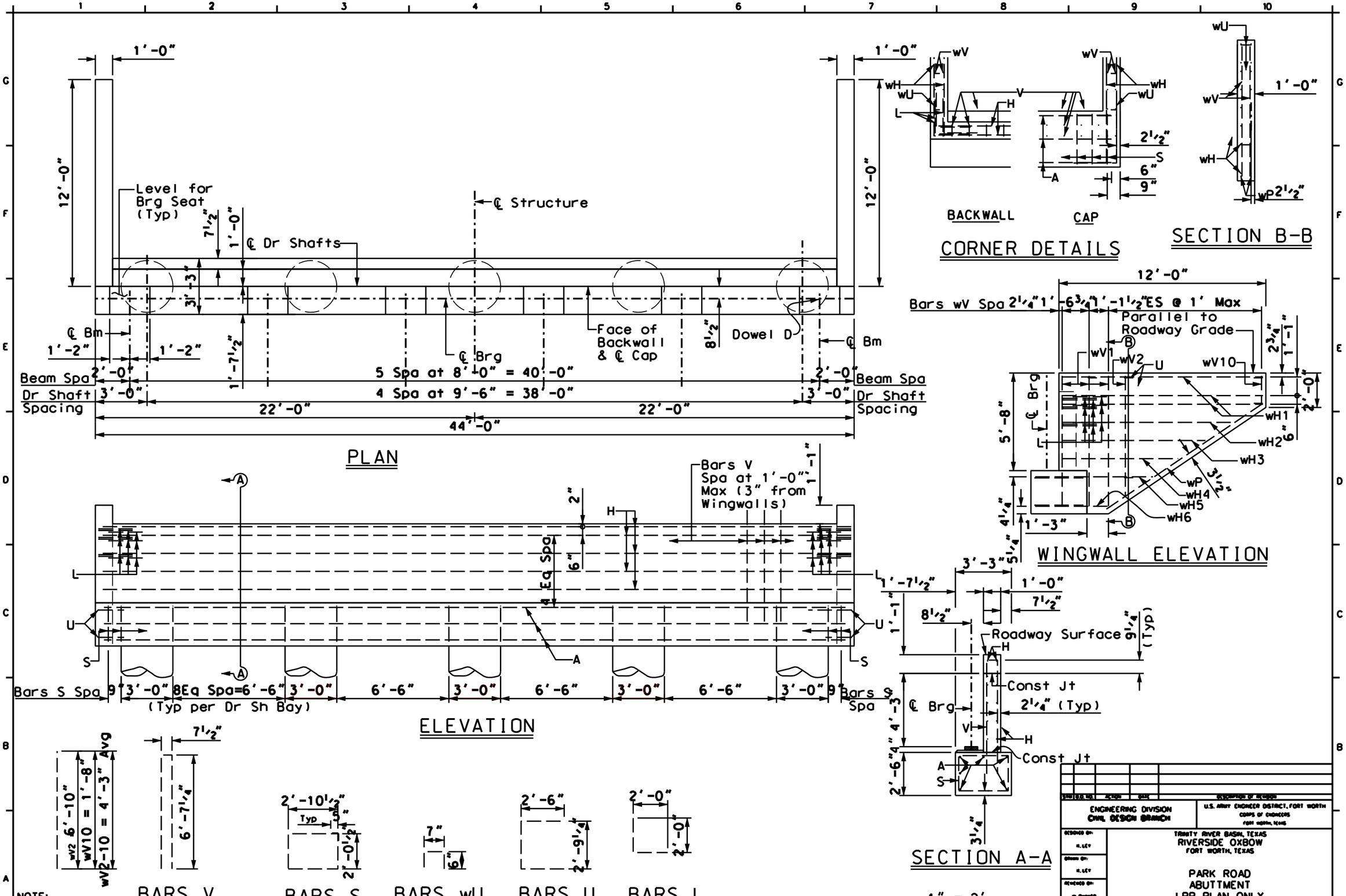
All reinforcing shall be Grade 60.
Concrete strength f'c = 4,000 psi.
Bar laps, where required, shall be as follows:
#4 = 1'-5"
#5 = 1'-9"

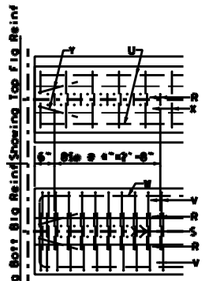
1" = 3'

ENGINEERING DIVISION CIVIL DESIGN BRANCH	U.S. ARMY ENGINEER DISTRICT, FORT WORTH CORPS OF ENGINEERS FORT WORTH, TEXAS			
DESIGNED BY: R. LEE	TRINITY RIVER BASIN, TEXAS RIVERSIDE OXBOW FORT WORTH, TEXAS			
DRAWN BY: R. LEE	PARK ROAD SLAB			
REVIEWED BY: W. SHANNON				
SUBMITTED BY: WILLIAM A. WALLACE, P.E. CHIEF, STRUCTURAL SECTION	SOL. NO.	DATED:		
	CONTR. NO.		PLATE	
	DRAWING NUMBER RS-08	SHEET NO. 513 OF		

CADD FILE NAME: slab.dgn

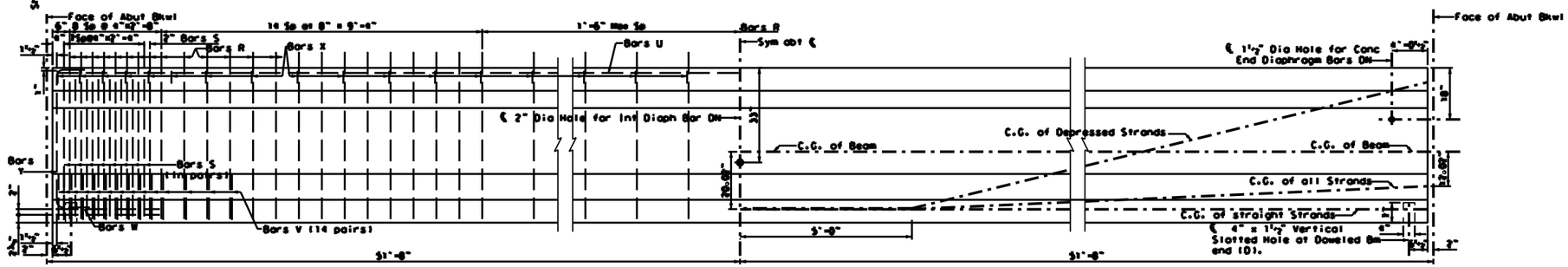
RS-08.dgn 10/29/2007 4:54:34 PM


PLAN
Level for Brg Seat (Typ)
℄ Structure
℄ Dr Shafts
℄ Bm
℄ Brg
Face of Backwall & ℄ Cap
Dowel D
Beam Spa
Dr Shaft Spacing
5 Spa at 8'-0" = 40'-0"
4 Spa at 9'-6" = 38'-0"
22'-0"
44'-0"
12'-0"
ELEVATION
Bars V Spa at 1'-0" Max (3" from Wingwalls)
4 Eq Spa
Bars S Spa
8Eq Spa=6'-6"
(Typ per Dr Sh Bay)
BACKWALL
CAP
CORNER DETAILS
SECTION B-B
WINGWALL ELEVATION
Bars wV Spa 2¼" 1'-6¾" 1'-1½" ES @ 1' Max
Parallel to Roadway Grade
Roadway Surface
Const Jt
SECTION A-A
1" = 2'
BARS V
BARS S
BARS wU
BARS U
BARS L
NOTE:
REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.
ENGINEERING DIVISION
CIVIL DESIGN BRANCH
U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS
TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS
PARK ROAD
ABUTTMENT
LPP PLAN ONLY
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION
RS-09
RS-09.dgn 10/29/2007 4:54:47 PM

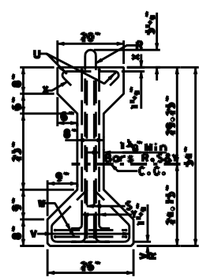


DETAIL OF BEAM END

	SPAN LENGTH (ft)	BEAM TYPE		PRESTRESSING STRANDS							CONCRETE	
				TOTAL					DEPRESSED		RELEASE STRGTH f'ci (psi)	MINIMUM 28 DAY COMP STRGTH f'c (psi)
				NO.	SIZE (in)	STRGTH f's (ksi)	"e" ℄ (in)	"e" END (in)	NO.	TO (in)		
Type IV Beams 30' Rdwy 8" Slab 8'-8" Bm Spa	102	IV		44	1/2	270K	20.02	12.02	8	52.0	5478	6218



ELEVATION OF BEAM

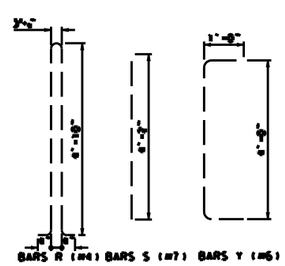


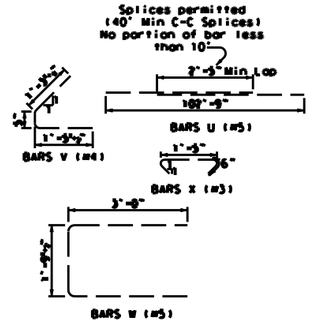
TYPE IV BEAM

AREA 788.4 in.²

I 260.403 in.⁴

Wt 821 Lb./LF





GENERAL NOTES:

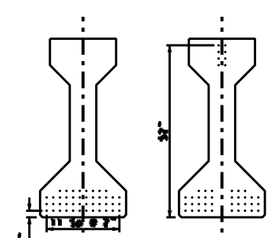
Designed in accordance with current AASHTO Standard Specifications.

All concrete shall be Class H. All reinforcing bars shall be Grade 60.

Bottom corners of all beam flanges and outside corners of exterior beam ends shall be chamfered 1/2" or rounded to a 1 1/2" radius.

Prestress losses for the designed beam have been calculated for a relative humidity of 60 percent.

Strands for the designed beam shall be 1/2" 270 ksi low relaxation strands pretensioned to 31.0 k each.



TYPE IV BM TYPE IV BM

NOTE:

REFERENCE DRAWING IS FROM THE REPORT ENTITLED:
"RIVERSIDE OXBOW, FROM THE INTERIM FEASIBILITY STUDY AND INTEGRATED ENVIRONMENTAL ASSESSMENT (APRIL 2005)"
DRAWING IS NOT TO SCALE.

1" = 1 1/2"

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

ENGINEERING DIVISION
CIVIL DESIGN BRANCH

U.S. ARMY ENGINEER DISTRICT, FORT WORTH
CORPS OF ENGINEERS
FORT WORTH, TEXAS

DESIGNED BY: R. LEY
DRAWN BY: R. LEY
REVIEWED BY: W. SHANNON

TRINITY RIVER BASIN, TEXAS
RIVERSIDE OXBOW
FORT WORTH, TEXAS

PARK ROAD
I-BEAM

SUBMITTED BY:
WILLIAM A. WALLACE, P.E.
CHIEF, STRUCTURAL SECTION

SOL. NO. | DATED:
CONTR. NO. | PLATE
DRAWING NUMBER RS-10 | SHEET NO. 515 OF

CADD FILE NAME: beam.dgn

REFERENCE FILE NAME | REFERENCE FILE DESCRIPTION

CONTR. NO.

RS-10.dgn 10/29/2007 4:54:59 PM